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THE
INTRODUCTORY
DISCOURSE AND LECTURES
DELIVERED IN BOSTON,
BEFORE THE
CONVENTION OF TEACHERS,
AND OTHER
FRIENDS OF EDUCATION,
ASSEMBLED TO FORM
THE
AMERICAN INSTITUTE OF INSTRUCTION.
AUGUST 1830.

PUBLISHED UNDER THE DIRECTION OF THE BOARD OF CENSORS.

BOSTON:
HILLIARD, GRAY, LITTLE AND WILKINS.

1831.

INSTRUMENTS

RECORDED AND INDEXED

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DISTRICT OF MASSACHUSETTS....TO WIT:

District Clerk's Office.

BE IT REMEMBERED, That on the third day of November, A. D. 1830, in the fiftyfifth year of the Independence of the United States of America, Hilliard, Gray, Little and Wilkins, of the said District, have deposited in this Office the Title of a Book, the right whereof they claim as Proprietors, in the words following, *to wit*:

'The Introductory Discourse and Lectures, delivered in Boston, before the Convention of Teachers, and other Friends of Education, assembled to form the American Institute of Instruction. August, 1830. Published under the Direction of the Board of Censors.'

In conformity to the Act of the Congress of the United States, entitled An Act for the encouragement of learning, by securing the copies of Maps, Charts and Books, to the Authors and Proprietors of such copies, during the times therein mentioned: and also to an Act entitled 'An Act supplementary to an Act, entitled, an Act for the encouragement of learning, by securing the copies of Maps, Charts and Books to the Authors and Proprietors of such copies during the times therein mentioned; and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints.'

JOHN W. DAVIS, *Clerk of the District of Massachusetts.*



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PREFACE.

ON the 15th of March, 1830, a meeting of teachers and other friends of education was held at the Columbian Hall in Boston. It was continued by adjournment from day to day until the 19th, and occupied with statements relative to the condition and wants of schools, in different parts of the New England States. It was thought that advantages would arise from future meetings of a similar kind, and from the formation of a society of teachers.

A committee was accordingly chosen on the 18th, to prepare a constitution for such a society, and to take measures for a future meeting. E. Bailey, B. D. Emerson, A. Andrews, G. B. Emerson, and G. F. Thayer of Boston, H. K. Oliver of Salem, and J. Wilder of Watertown, were this committee.

The work assigned them was executed at several meetings of the committee, held in April, May and June. The sketch of a constitution was formed; and, in order that the convention, which might be

assembled to take it into consideration, might be usefully occupied in the intervals of business, it was determined to invite gentlemen to give lectures before the convention, upon subjects of interest to the cause of education.

Such are the origin and occasion of the discourses which form the present volume.

The committee invited the lecturers, and suggested the subjects. Everything else was left entirely to the lecturers. Their opinions are their own. Perfect uniformity could not be expected from men who came from different and distant parts of the country, and who met for the first time at this convention. This free expression of opinions, independently formed, will not, certainly, be considered unfavorable to the eliciting of truth.

Agreeably to their instructions, the committee called a meeting, by invitations extensively circulated through the country, in the newspapers. The time of the summer holidays, the season of literary anniversaries, was thought most favorable to a general attendance.

The convention met on the 19th of August, in the Representatives' Hall, at Boston. It consisted of several hundred persons, most of them actual teachers, from at least eleven different States of the Union. It was organized by the choice of Wm. B. Calhoun of Springfield, as chairman, and Geo. B. Emerson and Dr J. W. M'Kean of Boston, as secretaries of the convention. In the subsequent absence of Mr Calhoun, W. Sullivan of Boston was called to the chair.

The convention proceeded immediately to discuss the draught of a constitution which was reported by the committee. This discussion occupied a large portion of four days, and terminated in the unanimous adoption of the constitution which follows at the end of the volume. The chief alterations from the original draught are in the preamble, which was first offered in the convention, and in articles first and fourth. A less comprehensive and assuming name, '*The New England Association of Teachers*,' had been offered by the committee. But as several of the Middle, Southern and Western States, were represented in the convention, and many persons, not teachers, were desirous of belonging to the society which was to be formed, it became obviously proper to adopt a name which should exclude none.

The intervals of discussion were spent in listening to the discourses contained in this volume. They are offered to the public as contributions to the storehouse of facts from which the science of education is to be formed. They are the fruits of observation and experiment. It probably will not lessen the interest with which they will be read, to know that they were, without exception, prepared in moments of relaxation from the most exhausting occupations, at the season of the year least of all suited to literary labor.

No country, it has often been remarked, has so great an interest in the education of its citizens, as this. Not only private welfare and happiness, and the advancement of the arts and sciences, but the

institutions of public justice, the privileges of civil and religious liberty, and our very existence as a free republic, depend on a high state of moral and intellectual culture.

The formation of the Institute, it is hoped, will do something towards elevating the standard and increasing the efficiency of popular instruction.

It will furnish the means, by the co-operation of its members, of obtaining an exact knowledge of the present condition of the schools, in all parts of the country. It will tend to render universal, so that it shall pervade every district and village, a strong conviction of the paramount national importance of preserving and extending the means of popular instruction; thus securing the aid of multitudes of fellow laborers in every portion of the country. It will tend to raise the standard of the qualifications of instructors, so that the business of teaching shall not be the last resort of dulness and indolence, but shall be considered, as it was in the days of republican Greece, an occupation worthy of the highest talents and ambition. It will hardly fail to show that education is a science, to be advanced, like every other science, by experiment; whose principles are to be fixed, and its capacities determined, by experiment; which is to be entered upon by men of a philosophical mind, and pursued with a philosophical spirit. It will be likely to bring forward the modes and objects of instruction in foreign nations and ancient times, and their applicability to the state of things among ourselves. It can-

not fail to enlist openly, on the side of popular education, the highest intellect and influence in the nation. If it accomplish these, or any of these objects, it will amply reward the labors of all who have acted in its formation. And that it will have this *tendency*, the feelings of the teachers who attended the convention, may be appealed to, in proof. Great numbers of these had come hundreds of miles, some more than five hundred, to be present on this occasion.

Many a teacher, on the first morning of the convention, must have ascended the steps that lead to the Hall of Representatives, and looked out upon the unequalled prospect commanded by this chosen spot in the 'city of the pilgrims,' with a sense of loneliness, and of doubt and misgiving ; but when he beheld the numbers that came flocking from near and distant parts, and saw the earnestness with which they were engaged in the good cause, and the ability evinced in conducting the business of the convention, every one must have gone home to his solitary duties, strengthened and cheered by the thought, that strong hands were in the work, and that he was no longer toiling alone.

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PRESIDENT WAYLAND'S

INTRODUCTORY DISCOURSE.

PRESIDENT WAYLAND'S

INTRODUCTORY DISCOURSE

INTRODUCTORY DISCOURSE,

BY

FRANCIS WAYLAND, JR.

PRESIDENT OF BROWN UNIVERSITY.

IN the long train of her joyous anniversaries, New England has yet beheld no one more illustrious than this. We have assembled to-day, not to proclaim how well our fathers have done, but to inquire how we may enable their sons to do better. We meet, not for the purposes of empty pageant, nor yet of national rejoicing; but to deliberate upon the most successful means for cultivating, to its highest perfection, that invaluable amount of intellect, which Divine Providence has committed to our hands. We have come up here to the city of the Pilgrims, to ask how we may render their children most worthy of their ancestors and most pleasing to their God. We meet to give to each other the right hand of fellowship in carrying forward this all-important work, and here to leave our professional pledge, that, if the succeeding generation do not act worthily, the guilt shall not rest upon those who are now the Instructors of New England.

Well am I aware that the occasion is worthy of the choicest effort of the highest talent in the land. Sincerely do I wish, that upon such talent the duty of addressing you this day had devolved. Much do I regret that sudden indisposition has deprived me of the time which had been set apart to meet the demands of the present occasion, and that I am only able to offer for your consideration such reflections as have been

snatched from the most contracted leisure, and gleaned amid the hurried hours of languid convalescence. But I bring, as an offering to the cause of Education, a mind deeply penetrated with a conviction of its surpassing importance, and enthusiastically ardent in anticipating the glory of its ultimate results. I know, then, that I may liberally presume upon your candor, while I rise to address those, to very many of whom it were far more befitting that I quietly and humbly listened.

The subject which I have chosen for our mutual improvement, is, *The object of intellectual education ; and the manner in which that object is to be attained.*

I. It hath pleased Almighty God to place us under a constitution of universal law. By this we mean, that nothing, either in the physical, intellectual or moral world, is in any proper sense contingent. Every event is preceded by its regular antecedents, and followed by its regular consequents ; and hence is formed that endless chain of cause and effect which binds together the innumerable changes which are taking place everywhere around us.

When we speak of this system as subjected to universal law, we mean all this ; but this is not all that we mean. The term law, in a higher sense, is applied to beings endowed with conscience and will, and then there is attached to it the idea of rewards and punishments. It is then used to signify a constitution so arranged, that one course of action shall be inevitably productive of happiness, and another course shall be as inevitably productive of misery. Now, in this higher sense is it strictly and universally true, that we are placed under a constitution of law. Every action which we perform, is as truly amenable as inert matter, to the great principles of the government of the universe, and every action is chained to the consequences which the Creator has affixed to it, as unalterably as any sequence of cause and effect in physics. And thus, with equal eloquence and truth, the venerable Hooker has said, 'Of Law, here can be no less acknowledged, than that her seat is the

bosom of God, her voice the harmony of the world ; all things in heaven and earth do her homage, the very least as feeling her care, and the very greatest as not exempted from her power ; both angels and men and creatures of what condition soever, though each in different sort and manner, yet all with uniform consent, admiring her as the mother of their peace and joy.'

Such a constitution having been established by a perfectly wise Creator, it may be easily supposed that it will remain unchangeable. His laws will not be altered, for our convenience. We may obey them or disobey them, we may see them or not see them, we may be wise or unwise, but they will be rigidly and unalterably enforced. Thus must it ever be, until we have the power to resist the strength of omnipotence.

Again ; it is sufficiently evident that the very constitution which God has established, is, with infinite wisdom and benevolence, devised for just such a being, physical, intellectual, and moral, as man. By obedience to the laws of God, man may be as happy as his present state will allow. Misery is always the result of a violation of some of the laws which the Creator has established. Hence, our great business here, is, *to know and obey the laws of our Creator.*

That part of man by which we know, and, in the most important sense, obey the laws of the Creator, is called MIND. I use the word in its general sense, to signify, not merely a substance, not matter, capable of intellection, but one also capable of willing, and to which is attached the responsibility of right and wrong in human action. And, still further, it is one of the laws of mind, that increased power for the acquisition of knowledge, and a more universal disposition to obedience, may be the result of the action of one mind upon another, or, of the well-directed efforts of the individual mind itself.

Without some knowledge of the laws of nature, it is evident that man would immediately perish. But it is possible for him to have only so much knowledge of them as will barely keep generation after generation in existence, without either adding

anything to the stock of intellectual acquisition, or subjecting to his use any of the various agents which a bountiful Providence has everywhere scattered around, for the supply of his wants and the relief of his necessities. Such was the case with the Aborigines of our country, and such had it been for centuries. Such, also, with but very few and insignificant exceptions, is the case in Mohammedan and Pagan countries. The sources of their happiness are few and intermitting—those of their misery multiplied and perpetual.

Looking upon such nations as these, we should involuntarily exclaim, What a waste of being, what a loss of happiness, do we behold! Here are intelligent creatures, placed under a constitution devised by Infinite Wisdom to promote their happiness. The very penalties which they suffer, are so many proofs of the divine goodness—mere monitions to direct them in the paths of obedience. And besides this, they are endowed with a mind perfectly formed to investigate and discover these laws, and to derive its highest pleasure from obeying them. Yet that mind, from want of culture, has become useless. It achieves no conquests. It removes no infelicities. Here, then, must the remedy be applied. This immaterial part must be excited to exertion, and must be trained to obedience. Just so soon as this process is commenced, a nation begins to emerge from the savage, and enter upon the civilized state. Just in proportion to the freedom and the energy with which the powers of the mind are developed, and the philosophical humility with which they are exercised, does a people advance in civilization. Just in proportion as a people is placed under contrary influences, is its movement retrograde.

The science which teaches us how to foster these energies of mind is the science of Education. In few words, I would say, *the object of the science of Education, is, to render mind the fittest possible instrument for DISCOVERING, APPLYING, or OBEYING, the laws under which God has placed the universe.*

That all this is necessary, in order to carry forward the

human species to the degree of happiness which it is destined, at some time or other, to attain, may be easily shown.

The laws of the universe must be *discovered*. Until they are discovered, we shall be continually violating them and suffering the penalty, without either possibility of rescue or hope of alleviation. Hence the multitude of bitter woes which ignorance inflicts upon a people. Hence the interest which every man should take in the progress of knowledge. Who can tell how countless are the infelicities which have been banished from the world, by the discovery of the simple law that a magnetized needle, when freely suspended, will point to the north and south !

Nor is it sufficient that a law be discovered. Its relations to other laws must be ascertained, and the means devised by which it may be made to answer the purposes of human want. This is called *application*, or *invention*. The law of the expansive power of steam was discovered by the Marquis of Worcester, in 1663. It remained, however, for the inventive power of Watt and Fulton, more than a century afterwards, to render it subservient to the happiness of man. From want of skill in a single branch of this department of mental labor, the human race has frequently been kept back for ages. The ancients, for instance, came very near the invention of the printing press. Thus has it been with several other of the most important inventions. It makes a thoughtful man sad, at the present day, to observe how many of the most important agents of nature we are obliged to expose to the gaze of lecture-rooms, without being able to reveal a single practical purpose for which they were created.

But this is not all. A man may know a law of his Creator, and understand its application ; but if he do not *obey* it, he will neither reap the reward nor escape the penalty which the Creator has annexed to it. Here we enter, at once, into the mysterious region of human will, of motive and of conscience. To examine it at present is not my design. I will only remark, that some great improvement is necessary in this part

of our nature, before we can ever reap the benefits of the present constitution of the universe. I do not think that any philosopher can escape the conviction, that when important truth is the subject of inquiry, we neither possess the candor of judgment, nor the humility of obedience, which befits the relations existing between a creature and his Creator. In proof of this, it is sufficient to refer to well known facts. Galileo suffered the vengeance of the Inquisition, for declaring the sun to be the centre of the planetary system! How slow were the learned in adopting the discoveries of Hervey or of Newton! Still more visible is this obstinacy, when the application of a moral law is clearly discovered. Though supported by incontrovertible argument, how slowly have the principles of religious toleration gained foothold even in the civilized world! After the slave trade had been proved contrary to every principle of reason and conscience, and at variance with every law of the Creator, for nearly twenty years did Clarkson and his associates labor, before they could obtain the act for its abolition. And to take an illustration nearer home,—how coolly do we look on and behold lands held by unquestionable charter from Almighty God, in defiance of an hundred treaties by which the faith of this country has been pledged—in violation of every acknowledged law, human and divine, wrested from a people, by whose forbearance, a century ago, our fathers were permitted to exist! I speak not the language of party. I eschew and abhor it; but ‘I speak with the freedom of history, and I hope without offence.’ These examples are at least sufficient to show us, that the mind of man is not, at present, the fittest instrument possible for obeying the laws of his Creator, and that there is need, therefore, of that science which shall teach him to become such an instrument.

The question which will next arise, is this:—Can these things be taught? Is it practicable, by any processes which man can devise, to render mind a fitter instrument for discovering, applying and obeying the laws of his Creator? We shall proceed, in the next place, to show that all this is practicable.

1. It is practicable to train the mind to greater skill in *discovery*. A few facts will render this sufficiently evident.

It will not be denied that some modes of thinking are better adapted to the discovery of truth than others. Those trains of thought which follow the order of cause and effect, premises and conclusion, or, in general, what is considered the order of the understanding, are surely more likely to result in discovery than those which follow the order of the casual relations, as of time, place, resemblance and contrast, or, as it is commonly called, the order of the imagination. Discovery is the fruit of patient thought, and not of impetuous combination. Now it must be evident that mind, directed in the train of the understanding, will be a far better instrument of discovery than if under the guidance of the imagination. And it is evident that the one mode of thinking may be as well cultivated as the other, or as any mode whatsoever. And hence has arisen the mighty effect which Bacon produced upon the world. He allured men from the weaving of day-dreams to the employment of their reason. Just in proportion as we acquire skill in the use of our reason, will be the progress of truth.

Again; there can be no doubt that, in consequence of the teaching of Bacon, or, in other words, in consequence of improvement in education, the human mind has, in fact, become a vastly more skilful instrument of discovery than ever it was before. In proof of this, I do not refer merely to the fact, that more power has been gained over the agents of nature, and that they have been made to yield a greater amount of human happiness to the human race, within the last one hundred years, than for ten times that period before. This, of itself, would be sufficient to show an abundant increase of intellectual activity. I would also refer to the fact that several of the most remarkable discoveries have been made by different men at the same time. This would seem to show, that mind in the aggregate was moving forward, and that everything with which we are now acquainted must soon have been discovered,

even if it had eluded the sagacity of those who were fortunate enough to observe it. This shows that the power of discovery has already been in some degree increased by education. What has been so auspiciously begun, can surely be carried to far greater perfection.

Again; if we inquire what are those attributes of mind on which discovery mainly depends, I think we shall find them to be patient observation, acute discrimination, and cautious induction. Such were the intellectual traits of Newton, that prince of modern philosophers. Now it is evident that these attributes can be cultivated, as well as those of taste or imagination. Hence, it seems as evident that the mind may be trained to discovery, that is, that mind may be so disciplined as to be able to ascertain the particular laws of any individual substance, as that any other thing may be done.

2. By *application* or *invention*, I mean the contriving of those combinations by which the already discovered laws of the universe, may be rendered available to the happiness of man. It is possible to render the mind a fitter instrument for the accomplishment of this purpose.

In proof of this remark, I may refer you to the two first considerations to which I have just adverted; namely, that some trains of thought are more productive of invention than others, and that, by following those trains, greater progress has, within a few years, been made in invention, than within ten times that period before.

It is proper, however, to remark, that the qualities of mind on which invention depends, are somewhat dissimilar from those necessary to discovery. Invention depends upon accuracy of knowledge in detail, as well as in general, and a facility for seizing upon distant and frequently recondite relations. Discovery has more to do with the simple quality, invention with the complex connexions. Discovery views truth in the abstract; invention views it either in connexion with other truth, or in its relation to other beings. Hence has it so frequently taken place, that philosophers have been

unable to avail themselves of their own discoveries ; or, in other words, that the powers of discovery and of invention are so seldom combined in the same individual. In one thing, however, they agree. Both depend upon powers of mind capable of cultivation ; and, therefore, both are susceptible of receiving benefit beyond any assignable degree, by the progress of education.

3. The mind may be rendered a fitter instrument for obeying the laws of the universe. This will be accomplished, when men, first, are better acquainted with the laws of the universe, and second, when they are better disposed to obey them. That both of these may be accomplished, scarcely needs confirmation.

For, first, I surely need not consume your time to prove, that a much greater amount of knowledge of the laws of the universe might be communicated in a specified time, than is communicated at present. Improvement in this respect depends upon two principles ;—first, greater skill may be acquired in teaching ; and second, the natural progress of the sciences is towards simplification. As they are improved, the more proximate relations of things are discovered, the media are rendered clearer, and the steps in the illustration of truth less numerous. As a man knows more of the laws of his Creator, he can surely obey them better.

And, secondly, those dispositions which oppose our meek and humble obedience, may be corrected. Candor may be made to take the place of prejudice, and envy may be exchanged for a generous ardor after truth. This a good teacher frequently accomplishes now. And that the Gospel of Jesus Christ does present a most surprising cure for those dispositions, which oppose the progress of truth and interfere with our obedience to the moral laws of our being, no one, who, at the present day, looks upon the human race with the eye of a philosopher, can with any semblance of candor venture to deny.

It would not be difficult, did time permit, by an examination of the various laws, physical, intellectual, and moral, under

which we are placed, to show that the principles which I have been endeavouring to illustrate, are universal, and apply to every possible action of the most eventful life. It could thus be made to appear that all the happiness of man is derived from discovering, applying, or obeying the laws of his Creator, and that all his misery is the result of ignorance or disobedience ; and hence, that the good of the species can be permanently promoted, and permanently promoted only by the accomplishment of that which I have stated to be the object of education.

I have thus far endeavoured to show, from our situation as just such creatures, namely, under laws of which we come into the world ignorant, and laws which can only be known by a mind possessed of acquired power, that there is, in our present state, the need of such a science as that of education. I have endeavoured to show what is its object, and also to show that that object may be accomplished. I will now take leave of this part of the subject, with a few remarks upon the relation which this science sustains to other sciences.

1. If the remarks already made have the least foundation in truth, we do not err in claiming for education the rank of a distinct science. It has its distinct subject, its distinct object, and is governed by its own laws. And, moreover, it has, like other sciences, its corresponding art,—the art of teaching. Now if this be so, we would ask how any man should understand this science, any more than that of mathematics or astronomy, without ever having studied it, or having even thought about it? If there be any such art as the art of teaching, we ask how it comes to pass that a man shall be considered fully qualified to exercise it, without a day's practice, when a similar attempt in any other art would expose him to ridicule? Henceforth, I pray you, let the ridicule be somewhat more justly distributed.

2. The connexions of this science are more extensive than those of any other. Almost any one of the other sciences may flourish independently of the rest. Rhetoric may be car-

ried to high perfection, whilst the mathematics are in their infancy. Physical science may advance, whilst the science of interpretation is stationary. No science, however, can be independent of the science of education. By education their triumphs are made known; by education alone can they be multiplied.

Hence, thirdly, it is upon education that the progress of all other sciences depends. A science is a compilation of the laws of the universe on one particular subject. Its progress is marked by the number of these laws which it reveals, and the multiplicity of their relations which it unfolds. Now we have before shown that the number of laws which are discovered, will be in proportion to the skill of mind, the instrument which is to discover them. Hence, just in proportion to the progress of the science of education, will be the power which man obtains over nature, the extent of his knowledge of the laws of the universe, and the abundance of means of happiness which he enjoys.

If this be so, it would not seem arrogant to claim for education the rank of the most important of the sciences, excepting only the science of morals. And, hence, we infer, that it presents subjects vast enough, and interests grave enough, to task the highest effort of the most gifted intellect, in the full vigor of its powers. Is it not so? If it be so, on what principle of common sense is it, that a man is considered good enough for a teacher, because he has most satisfactorily proved himself good for no one thing else? Why is it, that the utter want of sufficient health to exercise any other profession, is frequently the only reason why a man should be thrust into this, which requires more active mental labor in the discharge of its duties, than any other profession whatsoever? Alas! it is not by teachers such as these that the intellectual power of a people is to be created. To hear a scholar say a lesson, is not to educate him. He who is not able to leave his mark upon a pupil, never ought to have one. Let it never be forgotten, that, in the thrice resplendent days of the intellectual glory of

Greece, teachers were in her high places. Isocrates, Plato, Zeno, and Aristotle were, without question, stars of by very far the first magnitude, in that matchless constellation, which still surrounds with undiminished effulgence the name of the city of Minerva.

And lastly, if the science of education be thus important, is it not worthy of public patronage? Knowledge of every sort is valuable in a community, very far beyond what it costs to produce it. Hence it is for the interest of every man to furnish establishments by which knowledge can be increased. Of the manner in which this should be afforded, it belongs to political economists to treat. Let me suggest only a very few hints on the subject. Books are the repositories of the learning of past ages. Longer time than that of an individual's life, and greater wealth than falls to the lot of teachers, are required to collect them in numbers sufficient for extensive usefulness. The same may be said of instruments for philosophical research. Let these be furnished, and furnished amply. Let your instructors have the use of them, if you please, gratuitously; and if you do not please, not so, and then, on the principles which govern all other labor, let every teacher, like every other man, take care of himself. Give to every man prominent and distinct individuality. Remove all the useless barriers which shelter him from the full and direct effect of public opinion. Let it be supposed, that, by becoming a teacher, he has not lost all pretensions to common sense; and that he may possibly know as much about his own business as those, who, by confession, know nothing at all about it. In a word, make teaching the business of men, and you will have men to do the business of teaching. I know not that the cause of education, so far as teachers are concerned, requires any other patronage.

I come now to the second part of the subject, which, I am aware, it becomes me to treat with all possible brevity.

II. In what manner shall mind be thus rendered a fitter instrument to answer the purposes of its creation?

To answer this question, let us go back a little. We have shown that the present constitution of things is constructed for man, and that man is constructed for the present constitution. As mind, then, is the instrument by which he avails himself of the laws of that constitution, it may be supposed that it was endowed with all the powers necessary to render it subservient to his best interests. Were it possible, therefore, it would be useless to attempt to give it any additional faculties. All that is possible, is, to cultivate to higher perfection those faculties which exist, or to vary their relations to each other. In other words, to cultivate to the utmost the original faculties of the mind, is to render it the fittest possible instrument for discovering, applying, and obeying the laws of its creation.

This is, however, an answer to the question in the abstract, and without any regard to time. But the question to us, is not an abstract question; it has regard to time. That is to say, we do not ask simply what is the best mode of cultivating mind, but what is the best mode of doing it now, when so many ages have elapsed, and so many of the laws of the universe have been discovered. Much knowledge has already been acquired by the human race, and this knowledge is to be communicated to the pupil.

All this every one sees at first glance to be true. Nearly all the time spent in pupilage, under the most favorable circumstances, is in fact employed in the acquisition of those laws which have been already discovered. Without a knowledge of them, education would be almost useless. Without it, there could evidently be no progressive improvement of the species. Education, considered in this light alone, has very many and very important ends to accomplish. It is desirable that the pupil should be taught *thoroughly*; that is, that he should have as exact and definite a knowledge as possible of the law and of its relations. It is desirable that he be taught *permanently*; that is, that the truth communicated be so associated with his other knowledge, that the lapse of time will not easily erase it from his memory. It is important,

also, that *no more time be consumed in the process than is absolutely necessary*. He who occupies two years in teaching what might as well be taught with a little more industry in one year, does his pupil a far greater injury than would be done by simply abridging his life by a year. He not only abstracts from his pupil's acquisition that year's improvement, but all the knowledge which would have been the fruit of it for the remainder of his being.

X If, then, all that portion of our time which is devoted to education must be occupied in acquiring the laws of the universe, how shall opportunity be afforded for cultivating the original powers of the mind?

I answer, an all-wise Creator has provided for this necessity of our intellectual nature. His laws, in this, as in every other case, are in full and perfect harmony.

For, first, the original powers of the mind are cultivated by use. This law, I believe, obtains in respect to all our powers, physical, intellectual, and moral. But it must be by the use of each several faculty. The improvement of the memory does not, of necessity, strengthen the power of discrimination; nor does the improvement of natural logical acuteness of necessity add sensibility to the taste. The law on this subject seems to be, that every several faculty is strengthened and rendered more perfect exactly in proportion as it is subjected to habitual and active exercise.

+ And, secondly, it will be found that the secret of teaching most thoroughly, permanently, and in the shortest time; that is, of giving to the pupil in a given time the greatest amount of knowledge, consists in so teaching as to give the most active exercise to the original faculties of the mind. So that it is perfectly true, that if you wished so to teach as to make the mind the fittest possible instrument for discovering, applying and obeying the laws of the Creator, you would so teach as to give to the mind the greatest amount of knowledge; and, on the contrary, if you wished so to teach as to give to a pupil, in a given time, the greatest amount of knowledge, you

would so teach as to render his mind the fittest instrument for discovering applying and obeying the laws of its Creator.

I do not forget that the discussion of the practical business of teaching is, on this occasion, committed to other hands. You will, however, I trust, allow me to suggest here, one or two principles which seem to me common to all teaching, and which are in their nature calculated to produce the results to which I have referred.

1. Let a pupil understand everything that it is designed to teach him. If he cannot understand a thing this year, it was not designed by his Creator that he should learn it this year. But let it not be forgotten, that precisely here is seen the power of a skilful teacher. It is his business to make a pupil, if possible, understand. Very few things are incapable of being understood, if they be reduced to their ultimate elements. Hence the reason why the power of accurate and natural analysis is so invaluable to a teacher. By simplification and patience, it is astonishing to observe how easily abstruse subjects may be brought within the grasp of even the faculties of children. Let a teacher, then, first understand a subject himself. Let him know that he understands it. Let him reduce it to its natural divisions and its simplest elements. And then, let him see that his pupils understand it. This is the first step.

2. I would recommend the frequent repetition of whatever has been acquired. For want of this, an almost incalculable amount of invaluable time is annually wasted. Who of us has not forgotten far more than he at present knows? What is understood to-day, may with pleasure be reviewed to-morrow. If it be frequently reviewed, it will be associated with all our other knowledge, and be thoroughly engraven on the memory. If it be laid aside for a month or two, it will be almost as difficult to recover it as to acquire a new truth; and it is, moreover, destitute of the interest derived only from novelty. If this be the case with us generally, I

need not say how peculiarly the remark applies to the young.

X But lastly, and above all, let me insist upon the importance of universal practice of everything that is learned. No matter whether it be a rule in arithmetic, or a rule in grammar, a principle in rhetoric, or a theorem in the mathematics; as soon as it is learned and understood, let it be practised. Let exercises be so devised as to make the pupil familiar with its application. Let him construct exercises himself. Let him not leave them until he feels that he understands both the law and its application, and is able to make use of it freely and without assistance. The mind never will derive power in any other way. Nor will it, in any other way, attain to the dignity of certain, and practical, and available science.

So far as we have gone, then, we have endeavoured to show that the business of a teacher is so to communicate knowledge as most constantly and vigorously to exercise the original faculties of the mind. In this manner he will both convey the greatest amount of instruction, and create the largest amount of mental power.

I intended to confirm these remarks by a reference to the modes of teaching some of the most important branches of science. But I fear that I should exhaust your patience, and also that I might anticipate what will be much better illustrated by those who will come after me. I shall, therefore, conclude by applying these considerations to the elucidation of some subjects of general importance.

1. If these remarks be true, they show us in what manner text books ought to be constructed. They should contain a clear exhibition of the subject, its limits and relations. They should be arranged after the most perfect method, so that the pupil may easily survey the subject in all its ramifications; and should be furnished with examples and questions to illustrate every principle which they contain. It should be the design of the author to make such a book as could neither be

studied unless the pupil understood it, nor taught unless the instructor understood it. Such books, in every department, are, if I mistake not, very greatly needed.

If this be true, what are we to think of many of those school books which are beginning to be very much in vogue amongst us? There first appears, perhaps, an abridgement of a scientific text book. Then, lest neither instructor nor pupil should be able to understand it, without assistance, a copious analysis of each page or chapter or section, is added in a second and improved edition. Then, lest, after all, the instructor should not know what questions should be asked, a copious list of these is added to a third and still more improved edition. The design of this sort of work seems to be to reduce all mental exercise to a mere act of the memory, and then to render the necessity even for the use of this faculty as small as may be possible. Carry the principle but a little farther, and an automaton would answer every purpose exactly as well as an instructor. Let us put away all these miserable helps, as fast as possible, I pray you. Let us never forget that the business of an instructor begins where the office of a book ends. It is the action of mind upon mind, exciting, awakening, showing by example the power of reasoning and the scope of generalization, and rendering it impossible that the pupil should not think; this is the noble and the ennobling duty of an instructor.

2. These remarks will enable us to correct an error which of late has done very much evil to the science of education. Some years since, I know not when, it was supposed, or we have said it was supposed, that the whole business of education was to store the mind with facts. Dugald Stewart, I believe, somewhere remarks that the business of education, on the contrary, is to cultivate the original faculties. Hence the conclusion was drawn that it mattered not what you taught, the great business was to strengthen the faculties. Now this conclusion has afforded to the teacher a most convenient refuge against the pressure of almost every manner of attack. If you

taught a boy rhetoric, and he could not write English, it was sufficient to say that the grand object was not to teach the structure of sentences, but to strengthen the faculties. If you taught him the mathematics, and he did not understand the Rule of Three, and could not tell you how to measure the height of his village steeple, it was all no matter,—the object was to strengthen his faculties. If after six or seven years of study of the languages, he had no more taste for the classics than for Sanscrit, and sold his books to the highest bidder, resolved never again to look into them, it was all no matter,—he had been studying, to strengthen his faculties, while by this very process his faculties have been enfeebled almost to annihilation.

Now, if I mistake not, all this reasoning is false, even to absurdity. Granting that the improvement of the faculties is the most important business of instruction, it does not follow that it is the only business. What! will a man tell me that it is of no consequence whether or not I know the laws of the universe under which I am constituted? Will he insult me, by pretending to teach them to me in such a manner that I shall, in the end, know nothing about them? Are such the results to which the science of education leads? Will a man pretend to illuminate me by thrusting himself, year after year, exactly in my sunshine? No; if a man profess to teach me the laws of my Creator, let him make the thing plain, let him teach me to remember it, and accustom me to apply it. Otherwise, let him stand out of the way, and allow me to do it for myself.

But this doctrine is yet more false; for even if it be true, that it matters not what is taught, it by no means follows that it is no matter how it is taught. The doctrine in question, however, supposes that the faculties are to be somehow strengthened by 'going over,' as it is called, a book or a science, without any regard to the manner in which it is done. The faculties are strengthened by the use of the faculties; but this doctrine has been quoted to shield a mode of teaching, in which they were not used at all; and hence has arisen a great

amount of teaching, which has had very little effect, either in communicating knowledge, or giving efficiency to mind.

Let us, then, come to the truth of the question. It is important what I study; for it is important whether or not I know the laws of my being, and it is important that I study them, that they shall be of use to me. It is also important that my intellectual faculties be improved and therefore important that an instructor do not so employ my time as to render them less efficient.

3. Closely connected with these remarks is the question, which has of late been so much agitated, respecting the study of the ancient languages and the mathematics. On the one part, it is urged that the study of the languages is intended to cultivate the taste and imagination, and that of the mathematics to cultivate the understanding. On the other part, it is denied that these effects are produced; and it is asserted that the time spent in the study of them is wasted. Examples, as may be supposed, are adduced in abundance on both sides; but I do not know that the question is at all decided. Let us see whether anything that we have said will throw any light upon it.

I think it can be conclusively proved, that the classics could be so taught as to give additional acuteness to the discrimination, more delicate sensibility to the taste, and more overflowing richness to the imagination. So much as this, must, we think, be admitted. If, then, it be the fact that these effects are not produced—and I think we must admit that they are not, in any such degree as might reasonably be expected—should we not conclude that the fault is not in the classics, but in our teaching? Would not teaching them better be the sure way of silencing the clamor against them?

I will frankly confess that I am sad, when I reflect upon the condition of the study of the languages among us. We spend frequently six or seven years in Latin and Greek, and yet who of us writes,—still more, who of us speaks them with facility? I am sure there must be something wrong in the mode of our

teaching, or we should accomplish more. That cannot be skilfully done, which, at so great an expense of time, produces so very slender a result. Milton affirms, that what in his time was acquired in six or seven years, might have been easily acquired in one. I fear that we have not greatly improved since.

Again, we very properly defend the study of the languages on the ground that they cultivate the taste, the imagination, and the judgment. But is there any magic in the name of a classic? Can this be done by merely teaching a boy to render, with all clumsiness, a sentence from another language into his own? Can the faculties of which we have spoken, be improved, when not one of them is ever called into action? No. When the classics are so taught as to cultivate the taste and give vigor to the imagination,—when all that is splendid and beautiful in the works of the ancient masters, is breathed into the conceptions of our youth,—when the delicate wit of Flaccus tingestheir conversation, and the splendid oratory of Tully or the irresistible eloquence of Demosthenes is felt in the senate and at the bar—I do not say that even then we may not find something more worthy of being studied,—but we shall then be prepared, with a better knowledge of the facts, to decide upon the merits of the classics. The same remarks may apply, though perhaps with diminished force, to the study of the mathematics. If, on one hand, it be objected that this kind of study does not give that energy to the powers of reasoning which has frequently been expected, it may, on the other hand, be fairly questioned whether it be correctly taught. The mathematics address the understanding. But they may be so taught as mainly to exercise the memory. If they be so taught, we shall look in vain for the anticipated result. I suppose that a student, after having been taught one class of geometrical principles, should as much be required to combine them in the forms of original demonstration, as that he who has been taught a rule of arithmetic should be required to put

it into various and diversified practice. It is thus alone, that we shall acquire that *δυναμις αναλυτική*, the mathematical power which the Greeks considered of more value than the possession of any number of problems. When the mathematics shall be thus taught, I think there will cease to be any question, whether they add acuteness, vigor and originality to mind.

I have thus endeavoured, very briefly, to exhibit the object of education, and to illustrate the nature of the means by which that object is to be accomplished. I fear that I have already exhausted your patience. I will, therefore, barely detain you with two additional remarks.

1. To the members of this Convention allow me to say, Gentlemen, you have chosen a noble profession. What though it do not confer upon us wealth?—it confers upon us a higher boon, the privilege of being useful. What though it lead not to the falsely named *heights* of political eminence?—it leads us to what is far better, the sources of real power; for it renders intellectual ability necessary to our success. I do verily believe that nothing so cultivates the powers of a man's own mind as thorough, generous, liberal and indefatigable teaching. But our profession has rewards, rich rewards, peculiar to itself. What can be more delightful to a philanthropic mind, than to behold intellectual power increased a hundred fold by our exertions, talent developed by our assiduity, passions eradicated by our counsel, and a multitude of men pouring abroad over society the lustre of a virtuous example, and becoming meet to be inheritors with the saints in light—and all in consequence of the direction which we have given to them in youth? I ask again, what profession has any higher rewards?

Again, we at this day are in a manner the pioneers in this work in this country. Education, as a science, has scarcely yet been naturalized among us. Radical improvement in the means of education is an idea that seems but just to have en-

tered into men's minds. It becomes us to act worthily of our station. Let us by all the means in our power second the efforts and the wishes of the public. Let us see that the first steps in this course are taken wisely. This country ought to be the best educated on the face of the earth. By the blessing of Heaven, we can do much towards the making of it so. God helping us, then, let us make our mark on the rising generation.

DR WARREN'S LECTURE.

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LECTURE I.

ON THE

IMPORTANCE OF PHYSICAL EDUCATION.

BY J. C. WARREN, M. D.

WHEN I had the honor of being invited to make some remarks at this meeting on the subject of Physical Education, I felt much hesitation in undertaking the task. This hesitation arose from the apprehension that professional occupations would render it impracticable for me to present the subject in such a form as to excite the interest it demands. Aware, however, that the course of my pursuits had put me in possession of facts having an important bearing on the present modes of education, and feeling anxious that these facts should be made known to instructors and parents, and others concerned in the management of the rising generation,—I felt myself called on to waive the consideration of the objections to this labor, and to trust the results of my experience, in such a dress as I could afford to give them, to the candor of those to whom they were to be submitted.

Nature has destined that the physical and intellectual education of man should be conducted in very different modes. The culture of the mind requires the early, constant and well-directed efforts of an artificial system. That of the physical faculties is fully effected by the powers of unassisted nature.

All that she asks, is, that we would leave her free and unconstrained. Unhappily, our state of civilization, while it has copiously supplied the means of intellectual improvement, has, nearly in the same ratio, raised obstacles to the developement of the physical powers; and if we wished to restore to those their original spring, we should either revert to our primitive condition, or find substitutes in art for the modes employed by nature.

Considerations of this description have presented themselves occasionally, as I have been called to observe the evils arising from the prevalent systems of education, and also from too steady an application to literary pursuits in those whose education was completed. At one period, my attention was excited to the unfavorable influence of studious and sedentary habits on health, by the occurrence of alarming indisposition among the members of the sacred profession, a number of whom became its premature and much lamented victims. At another, I witnessed the effects of a mistaken system, on the constitution of multitudes of the fairest work of creative power. I have had the misfortune to behold, when it was too late to apply a remedy, numerous instances of decay in the most vigorous constitutions, and of distortion in the best proportioned forms.

The importance of health to the regular exercise of the faculties of mind, as well as those of body, is very well understood in theory, and very generally neglected in practice. We are daily seen to accumulate the treasures of science on intellects, where the physical machinery is disordered and made useless by the burden. What is the value of a brilliant genius, or a highly cultivated mind, to a weak and laboring frame? Let us suppose the existence of such a case in either of the learned professions. If it occur in the minister of religion, the organs of utterance are enfeebled, and the power of instructing his hearers is diminished or destroyed. The thoughts that should speak, remain unembodied in language, and the words that should burn, are extinguished on his lips. His usefulness

is impaired in the moment of his full career ; and even if his days are not cut off at an early period, he finds his mental abilities prematurely chained down by bodily weakness.

If it happen in the interpreter of the law,—the powerful workings of the mind in the investigation of obscure points, and the elaboration of profound arguments, break down a sickly and yielding organization, and bring on a train of nervous affections and perverted imaginations, as permanent perhaps as life, and less supportable than death.

Again, a bad constitution in a professor of the healing art, keeps him at variance with all his duties. How can he heal others, in whom the springs of health act feebly and imperfectly? A laborious and active course of duty demands a bodily vigor that can endure all kinds of unseasonable labor ; a steadiness of fibre, that can bear without agitation the sufferings of others, while attempting to relieve them ; and a firmness of health, able to resist the attacks of those malignant epidemics, that prostrate a whole community.

When we regard the influence of a debilitated body on the more delicate sex, we find it not less distressing. A young female, at the age of twelve or fourteen, presents a beautiful figure, rosy cheeks, an airy step, and the fulness of life and happiness in every movement. As she advances, her vivacity naturally lessens ; but, as if it would not be soon enough extinguished, it must be repressed by art. The lively motions of the body and limbs must be checked, the spirits must be restrained, and a sort of unnatural hypocrisy made to conceal every ingenuous movement. The activity of disposition is destroyed ; by confinement she loses the inclination for exercise, and passes from her school to a state of listlessness at home, or to frivolous and useless amusements, or perhaps to fresh tasks. By this regular repression of the physical powers, their energy is at last broken. Various organs lose their tone and their healthy action. Even the most solid parts are gradually impaired, and, being unable to support their ordinary burden, they sink under its weight, and bring on unchangeable deformity. Perhaps

the exterior of health may remain a little longer, although the destroying principle is working in the heart. Should she be called on to be a mother, then comes the trial of her strength. The fruit, so fair without, is then found decayed within, when scarcely matured. Next, the roses of the countenance wither; the limbs are feeble and tottering; the vivacity is extinguished; the whole system undermined, and ready to fall on the first impulse. Of what use now are all the finery of accomplishment, and the rich stores of literature and of science, the fruits of so many years' labor? They are all wasted, and perish unemployed.

What I have now stated as the result of the mode of female education in use at present, is not a picture of the imagination; it is a fair representation of what we are compelled to encounter, in almost daily experience.

My wish now is, to point out some of the principal ways in which literary pursuits may be destructive to health; and also to show what measures might be adopted to prevent these pernicious consequences.

Action is the object for which organization was created. If the organs are allowed to remain inactive, the channels of life become clogged; and the functions and even the structure get impaired. Young animals are filled with the desire of motion, in order that the fluids of the body may be forced rapidly through their tubes, the solids thus elongated and enlarged, and every part gradually and fully developed.

The immediate consequences of action on the bodily frame are familiar and visible to daily experience. Observe the sinewy arm of the mechanic. The muscles are large and distinct; and when put in motion, they become as hard as wood, and as strong as iron. Notice those who are accustomed to carry considerable weights on the head. The joints of the lower limbs are close-set and unyielding; the frame perfectly erect, and the attitude commanding. In the cultivator of the soil, though the form may be vitiated by neglect, you may observe that the appearance of every part is healthful, vigorous, and well fitted for labor.

While all of us are desirous of possessing the excellent qualities of strength, hardiness and beauty, how defective are our systems of education in the means of acquiring them? In the present state of civilization, a child, soon after it can walk, is sent to school; not so much for the purpose of learning, as to relieve its parents of the trouble of superintending its early movements. As he grows older, the same plan is incessantly pursued and improved on, till a large part of his time is passed in sedentary pursuits and in crowded rooms. In the short intervals of mental occupation, the boy is allowed to follow the bent of his inclinations, and seek in play that exercise which nature imperiously demands. The developement of his system, though not what it was destined to be, is attained in a certain way; and he is exempted from some of the evils, which fall heavily on the other sex.

The female, at an early age, is discouraged from activity, as unbecoming her sex, and is taught to pass her leisure hours in a state of quietude at home. The effects of this habit have been already spoken of in general terms; and I would now point out some of its results in a specific manner.

In the course of my observations, I have been able to satisfy myself that about half the young females brought up as they are at present, undergo some visible and obvious change of structure; that a considerable number are the subjects of great and permanent deviations; and that not a few entirely lose their health from the manner in which they are reared. The proportion of those who fall under the first description, I have already stated. The amount of the two last, it is impossible to ascertain with preciseness. I can venture to say, that it is sufficient to constitute a powerful claim on the attention of those engaged in the management of young persons.

The nature of all the particular affections and diseases thus induced, it would be impossible to describe in this place. I shall venture to direct your views to the details of only one of them.

The weight of the principal part of the body or trunk, the

weight of the neck, the head and the two upper extremities, are supported by a single bony column, called the spine. This column is about three inches in diameter. It consists of twentyfour pieces of bone placed one on the other; and between each two is interposed a substance, somewhat resembling caoutchouk or India-rubber, for the purpose of giving it elasticity. This column is hollow, and contains the spinal marrow. Now the spinal marrow is the origin and source of the nerves, that convey the influence necessary to voluntary motion; and they are sent off in pairs to the various muscles. The bony pieces of the spine are confined together by many small ligaments, by the elastic substance just spoken of, and by numerous muscles, affixed, not only to connect and support, but also to move them.

The bones of the spine, at an early period of life, are themselves in part composed of an elastic, cartilaginous or gristly substance; and are always of a porous and sponge-like texture. In consequence of this kind of organization, the spinal column possesses much elasticity and flexibility, which enable it to yield and to move in different directions, and expose it to receive permanent flexures, when there is a deficiency of natural strength in its composing parts.

Causes which affect the health and produce general weakness, operate powerfully on this part, in consequence of the complexity of its structure, and the great burden it supports. When weakened, it gradually yields under its weight, becomes bent and distorted, losing its natural curves, and acquiring others, in such directions as the operation of external causes tend to give to it; and these curves will be proportioned, in their degree and in their permanence, to the producing causes. If the supporting part is removed from its true position, the parts supported necessarily follow, and thus a distortion of the spine effects a distortion of the trunk of the body.

The change commonly begins at the part which supports the right arm. The column bends towards the right shoulder, forms a convexity on the side where the shoulder rests,

and thus elevates the right higher than the other. This elevation, or, as it is commonly called, growing out of the shoulder, is the first phenomenon that strikes the friends of the patient. Often when observed, it has already undergone a considerable change of position; and the change is not confined to the shoulder, nor to the portion of spine immediately connected with it. On examination, it will be discovered that the curvature to the right in the upper part of the column, is accompanied, as a natural consequence, by a bend of the lower part to the left, and a correspondent projection of the left hip. It is perfectly obvious, that the inclination of the upper part of a flexible stick to one side, will leave the lower part on the other; and when, by this inclination, the vertical support is lost, a disposition to yield at the curving points will continually increase, until it be counteracted by some other power. Thus it happens, then, that any considerable projection of the right shoulder will be attended by a correspondent projection of the left hip.

The rising of the shoulder involves other changes in the osseous fabric. For, as the spinal bones support the ribs, when these bones project, they necessarily push forwards the ribs dependent on them. These ribs form the frame of the chest, and of course the right side of the chest is projected forwards, and causes a deformity in the fore-part of the body. Nor do the changes stop here. The posterior ends of the ribs being pushed forwards, and the anterior ends being confined to the sternum or breast-bone, the right edge of the sternum will be drawn forwards, and the left edge consequently turned backwards. The fore-parts of the left ribs will be gradually forced inwards or backwards, and thus the left side of the chest distorted and contracted.

I am aware how difficult it is to have a distinct notion of these intricate changes in the human machinery, without an exhibition of the parts concerned in them; but it is my duty

to represent the train of phenomena as they exist in nature ; and I think they are sufficiently intelligible to excite consideration and inquiry.

Perhaps it may be imagined, that the cases I have described are of rare occurrence, and that we have no occasion to alarm ourselves about a few strange distortions, the consequence of peculiar and accidental causes. If such were in fact the truth, I would not have occupied your time with the minute details of these unpleasant subjects. Unhappily they are very common. I feel warranted in the assertion already intimated, that of the well-educated females within my sphere of experience, about *one half are affected with some degree of distortion of the spine*. This statement will not be thought exaggerated, when compared with that of one of the latest and most judicious foreign writers. Speaking of the right, lateral curvature of the spine, just described, he tells us, 'It is so common, that out of twenty young girls, who have attained the age of fifteen years, there are not two who do not present very manifest traces of it.'*

As the bones serve to contain most of the great organs, any change in their forms will be likely to produce changes in the condition and healthy action of these organs. The spine gives lodgement, as has been said, to the spinal marrow ; and this sends out nearly all the nerves that carry the influence of voluntary motion, and many of those that convey energy to the great organs of respiration, circulation and digestion. When the containing part is distorted, the part contained is likely to be disturbed, and this disturbance must produce important effects on the nerves issuing from it, and of course on the organs to which these nerves are distributed. If the compression be slight, the operations of the organs will be partially disturbed. Hence proceed shortness of breath ; palpitation of the heart ; the phenomena of indigestion, flatulence, acidity, &c. These again give rise to the uncomfortable feelings

* Lachaise, Sur les Courbures de la Colonne Vertebrale. p. 23.

called nervous; though I believe they are sometimes the direct consequence of partial compression of the spinal marrow. When this pressure is considerable, the bad consequences are more obvious and formidable. In such instances, the muscles supplied with nerves from the part below that compressed, lose their activity. The circulation in the lower limbs is retarded, and they grow cold and livid, and swell. Sometimes even a complete paralysis, or loss of the power of motion, occurs in one or in both of these extremities.

The ribs and the breast-bone enclose and guard, as we have said, the organs of the chest. Their position being altered by the deviation of the spine, the cavity they form becomes deranged. Its left part, where the heart is placed, being diminished in extent, this organ is embarrassed in its movements, and, striving to relieve itself, produces painful and dangerous palpitations, and a general disturbance in the circulatory system. The lungs, for the same reasons, cannot fully expand. This function is partially performed, and the blood imperfectly oxygenated—an irregularity of itself sufficient to bring on a low state of health, and a disposition to disease.

The want of conformity between these organs and the bones they are in contact with, causing interference between the parts, an irritable condition of the lungs may be engendered, disposing to acute inflammation, or to the slow developement of chronic disease.

Having given some notion of the nature of the affections brought on by mistakes during the time of education, I shall advert now to their causes.

The general causes of these derangements are those things that weaken the constitution. They may be physical or mental. Among the most important physical causes, are want of the exercise proper to develop the powers of the body, and the taking of food, improper in quantity or quality. The mental causes may be a too constant occupation of the mind in study; the influence of feelings or passions of a depressing nature, &c.

The facts, that show the want of exercise to be one of the greatest causes of these affections and of the weakness that induces them, are very numerous. On the one side, we observe that young people, brought up to hardy and laborious occupations, whether they are males or females, do not suffer in this way. The sons and daughters of farmers and laborers, for example, never exhibit the deformities spoken of, except in cases where there is a great scrophulous defect, by inheritance.

A still more remarkable fact of a general nature may be seen on a comparison in this respect between the two sexes. The lateral distortion of the spine is almost wholly confined to females, and is scarcely ever found existing in the other sex. The proportion of the former to the latter is at least nine to one. In truth, I may say that I have scarcely ever witnessed a remarkable distortion, of the kind now spoken of, in a boy. What is the cause of the disparity? They are equally well formed by nature; or, if there be any difference, the symmetry of all parts is more perfect in the female than in the male. The difference in physical organization results from a difference of habits during the school education. It is not seen till after this process is advanced. The girl, when she goes from school, is, as we have before said, expected to go home and remain, at least a large part of the time, confined to the house. As soon as the boy is released, he begins to run and jump and frolic in the open air, and continues his sports till hunger draws him to his food. The result is, that in him all the organs get invigorated, and the bones of course become solid; while a defect exists in the other, proportionate to the want of physical motion.

A question may fairly be asked why these evils are greater now than formerly, when females were equally confined? The answer, in reference to the young females of our country, is, that they then took a considerable share in the laborious part of the domestic duties; now, they are devoted to literary occupations, of a nature to confine the body and require considerable efforts of the mind.

I shall not, in this place, say anything of the second of the physical causes of weakness, spoken of, as it will be adverted to hereafter. The next of these causes, which presents itself to our view, is of a moral nature ;—the influence of too great occupation of the mind in study, and that of feelings and passions of a depressing nature.

The operation of mental causes on the bodily frame is not unknown to any of us ; though they may not perhaps have been thought, in regard to education, to be of very great importance. As it is not in my power to enter fully into the subject, I would barely present it for your consideration.

The effect of anxiety, grief, and other feelings, in diminishing strength and wearing away health, are quite familiar. The loss of property and of friends, has been known to bring on diseases ; and it has sometimes happened, that an agreeable reverse or a favorable incident has speedily removed them. Confidence in a physician is a great help towards receiving benefit from his prescriptions ; and many of the cures wrought by empirical or quack medicines, are to be attributed rather to the operation of the mind, than to the action of the medicines on the disease.

The production of physical changes in a sudden and sensible way, by the action of moral causes, is comparatively rare, and difficult to comprehend. Yet medical men do sometimes have an opportunity of observing changes effected by this power, which might appear incredible, and almost miraculous, to those not aware of the force of mental operations on the human organs. I could adduce many such cases. Perhaps it will be proper to state one or two in detail.

When, some years ago, the metallic tractors were in the height of their reputation for the cure of diseases by external application to the part affected, the following experiment was performed by Dr Haygarth, of Bath. Two tractors were prepared, not of metal, but of a substance different from the genuine tractors, and made to resemble them. These were applied, in a number of instances, with all the good effects of the real trac-

tors. Among other remarkable cures was that of a person with a contraction of the knee joint, from a disease of six months' duration. After a few minutes' application, this man was directed to use his limb, and, to the surprise of all present, he was able to walk about the room. Such instances are not very unusual. Many empirics succeed by calling into action the same principle. The patient, after a number of contortions of the part affected, is directed to make use of his limb; and though this call on his imagination does not infallibly succeed, it is not wonderful that it occasionally does so.

I will relate another case of this kind. Some time since, a female presented herself to me, with a tumor, or swelling of the submaxillary gland of the neck, which had become what is commonly called a wen. It was about the size of an egg, had lasted two years, and was so very hard, that I considered any attempt to dissipate it by medicine to be vain, and advised its removal by an operation. To this the patient could not bring her mind; therefore, to satisfy her wish, I directed some applications of considerable activity to be made to the part, and these she pursued a number of weeks, without any change. After this, she called on me, and, with some hesitation, begged to know, whether an application recommended to her would in my opinion be safe. This consisted in applying the hand of a dead man three times to the diseased part. One of her neighbours now lay dead, and she had an opportunity of trying the experiment, if thought not dangerous. At first, I was disposed to divert her from it; but, recollecting the power of the imagination, I gravely assured her she might make the trial without apprehension of serious consequences. A while after, she presented herself once more, and, with a smiling countenance, informed me she had used this remedy and no other since I saw her; and, on examining for the tumor, I found it had disappeared.

The possibility of operating powerfully on the corporeal organization by moral causes being admitted, it is clear that the long exertion of intellectual efforts, and still more the fre-

quent action of depressing passions, may, and even must, have a great influence on the condition of the body, at the flexible period when education and growth are going on together.—A close and constant occupation of mind, too long continued, lessens the action of the heart; and a languid circulation, thus being induced, prevents the full growth of the body. Depressing passions act more conspicuously. You may possibly have noticed, though the case is rare in this country, the condition of children subjected to a persevering system of harshness at home. They are pale and shrivelled, and their growth is checked.

In the present modes of education, great pains are taken to excite the imagination by competition. These efforts are attended with but too much success in susceptible minds. An anxiety to excel becomes the predominant passion. The health, the sports, and too often the friendships of youth are sacrificed to the desire of surpassing those around. When this becomes an all-absorbing passion, the result is most unfriendly to physical organization; and a multitude of fine constitutions are ruined by it, in both sexes.

Whether any proper substitute can be found, in our sex, for competition and rivalry, I must leave to others to decide. So far as my experience extends, I should give an affirmative answer; and while I do not pretend to be a very competent judge in the case, it is fair to say, that the habit of giving public instructions for more than twenty years, has afforded me some conclusions of a satisfactory nature.

The application of the system of rivalry to the softer sex, I speak with submission to greater experience, appears to me fraught with mischief. It inflames the imagination, festers the passions, and poisons the happiness of the brightest days of life; and since the very highest grade of literary acquirement is not essential to the duties of the sex, it seems as unnecessary as it is pernicious.

I have just made a question whether there is a substitute, which is sufficiently practical to be of general use. I do not know that

there is ; and if none exists, I think the ingenuity and intelligence of instructors could not be employed on a more important subject, than in devising such substitute. The spirit of improvement has, I imagine, already discovered that the reasoning process may be generally employed with great success in the instruction of young persons. I know individuals, who use it to a considerable extent, and with the most happy results. They endeavour to enforce on their pupils the doctrine that the path of duty is the most easy and most for the interest of the individual to pursue. They do this by conversation and by argument ; and the process succeeds with those who are capable of being influenced in any way,—and why should it not ? Children of the earliest age are perfectly capable of feeling the force of reason ; and I believe it will generally be found that they are under the power of their parents, rather in proportion to the employment of this agent, than to that of the rod or any other compulsory means. If they understand reason, at so early a period, surely they cannot lose their susceptibility to it, at one more advanced. There are, I know, minds, on which the powers of language make no impression, and all the weapons of argument fall as if pointless. But these are to be considered as exceptions to general laws—cases in which all the means of severity and kindness equally fail. They should not cause discouragement. Patience is the everlasting motto of the instructor. With it he performs wonders—without it he can do nothing.

The remarks made above, will give some notion of the most important of what I conceive to be general causes of ill health and imperfect growth, during the educating process.

It may not be useless to say a few words on some of the immediate causes of spinal distortion, which may be called local, in opposition to the former.

The most obvious of the local causes are bad postures of the body and limbs. The habit of bending the neck, while writing or drawing, gradually compresses the vertebræ, and the

intervertebral substance on their anterior part, and causes a permanent change in the form of this part of the spinal column. This distortion is so very common among us, that we are apt to consider it a natural formation. In fact, however, it is entirely artificial in a great number of instances. Sometimes it is the consequence of negligence, and not unfrequently of timidity. Whether it tends to impair the health, always, I will not say—that it sometimes does so, I am certain; and its effect in deforming the shape is even greater than a moderate degree of lateral curve.

The immediate cause of the lateral curve of the spine to the right, opposite to the right shoulder, is the elevation and action of the right arm in drawing and writing. This posture pulls the part of the spinal column to which the muscles of the right arm are fixed, to the right side. The convexity of the spine thus produced keeps the right shoulder elevated, and the left consequently depressed. The lower part of the column is thrown to the left side; and this displacement being favored by the disposition to rest on the left foot, while standing to speak or read, there comes to be a permanent projection of the left hip. The postures employed in practising on musical instruments, sometimes bring on these distortions; as for example, a great use of the harp favors the disposition to lateral curvature, from the constant extension of the right arm.

Having adverted to the nature and the causes of some of the defects that arise from want of attention to physical education, I shall now throw out some hints, as to the modes in which it may be improved.

Nature, as we have before said, if left to herself, is all-sufficient to the developement of physical organization. But we live in an artificial state—a state that continually thwarts the course of the native dispositions of the animal economy; and as we must abandon the advantages of these, we must seek for substitutes in an artificial process.

The principles which should form the basis of such a process, will readily be seen, on attending to the nature and the

causes of these defects. We shall observe that the remedy, or rather the preventive means, lies in a certain regulation of the sentiments and passions and intellectual operations ; in promoting bodily activity ; in a salutary regimen, and in some other inferior considerations. In regard to the first of these, that is, to what relates to the mind, I have already said all I intend at this time ; and I shall now advert to the others.

Towards a perfect system of education, it is necessary there should be a balance preserved between physical and intellectual cultivation. When the mind is closely occupied, the body should be carefully guarded. If the pursuits of the former are severe and absorbing, those of the latter should be cheerful and relaxing. Instead, then, of abandoning the physical to the intellectual culture, it should be increased in the same ratio, and followed with the same earnestness.

Exercise is so material to physical education, that it has sometimes been used synonymously, though it really constitutes only a part of it. In order that exercise may have its due operation, it must begin at the earliest period of life, and of course, the parent must, in this, act the part of instructor. He must take pains to have the infant carried into the air, every day, and in every season ; for, whatever may be the dangers of such a course, they are in the end less than those incident to the accidental exposures of a delicate constitution. In the earlier years, the dress should be arranged so as to allow that use of the body and limbs, to which nature prompts, with freedom, and without impropriety. When children are sent to school, care should be taken that they are not confined too long. Children under fourteen should not be kept in school more than six or seven hours a day ; and this period should be shortened for females. It is expedient that it should be broken into many parts ; so as to avoid a long confinement at one time. Young persons, however well disposed, cannot support a restriction to one place and one posture. Nature resists such restrictions ; and if enforced, they are apt to create disgust with the means and the object. Thus children learn to hate studies

that might be rendered agreeable, and they take an aversion to instructors, who would otherwise be interesting to them.

The postures they assume while seated at their studies, are not indifferent. They should be frequently warned against the practice of maintaining the head and neck long in a stooping position; and the disposition to it should be lessened by giving a proper elevation and slope to the desk; and the seat should have a support or back of a few inches, at its edge. The arms must be kept on the same level; and there should be room to support them equally, or the right will be apt to rise above the left, from its constant use and elevation. A standing posture in writing and studying, is not commendable for young persons. The secret of posture consists in avoiding all bad positions, and avoiding all positions long continued.

The ordinary carriage of the body in walking should be an object of attention to every instructor. How different are the impressions made on us by a man, whose attitude is erect and commanding, and by one who walks with his face directed to the earth, as if fearful of encountering the glances of those he meets! Such attentions are even of great importance to the fairer sex, where we naturally look for attraction in some form or shape. If nature has not given beauty of face to all, she has given the power of acquiring a graceful movement and upright form—qualities more valuable and more durable than the other. These qualities are lost or gained at school; and of course they lie, to some extent, within the control of the instructor. It seems to me it would afford a great addition of satisfaction to the superintendent and guardian of the rising population, to be able to send out to the world his annual recruits, not only well imbued with knowledge and virtue, but also endowed with a handsome form and graceful manners.

The influence of an upright form and open breast on the health, has been, I think, sufficiently explained; and what may be done to acquire these qualities, is shown by many remarkable facts, one of which I will mention. For a great number of years, it has been the custom in France, to give to young fe-

males of the earliest age, the habit of holding back the shoulders, and thus expanding the chest. From the observations of anatomists lately made, it appears that the clavicle or collar bone is actually longer in females of the French nation than in those of the English. As the two nations are of the same race, as there is no other remarkable difference in their bones, and this is peculiar to the sex, it must be attributed, as I believe, to the habit abovementioned, which, by the extension of the arms, has gradually produced a national elongation of this bone. Thus we see that habit may be employed to alter and improve the solid bones. The French have succeeded in the developement of a part, in a way that adds to health and beauty, and increases a characteristic that distinguishes the human being from the brute.

As young persons advance in age, and as the disposition to motion naturally diminishes, it becomes important to encourage and provide for it, especially in females, and in young men of studious character. Instead of restraining their movements, and blaming the disposition to frolic, they should be allowed and advised to it, at proper times, and in becoming modes.

Next to walking in the open air, the best exercise for a young female is dancing. This brings into action a large part of the muscles of the body and lower limbs, and gives them grace and power. The mode in which I wish to recommend its use, is not in balls and parties and crowded assemblies, but at home, alone, or with two or three friends, or in the domestic circle. As this practice does not give motion to the upper limbs, and as the exercising them is too apt to be neglected, it is important to provide the means of bringing them into action, as well to develop their own powers, as to enlarge and invigorate the chest, with which they are connected, and which they powerfully influence. The best I know of is the use of the triangle.* This admirably exerts the upper limbs and

* The triangle is made of a stick of walnut wood, four feet long, an inch and a half in diameter. To each end is connected a rope, the opposite extremities of which being confined together, are secured to the ceiling of a room, at such height as to allow the motion of swinging by the hands.

the muscles of the chest, and, indeed, when adroitly employed, those of the whole body. The plays at ball with both hands, and that of dumb bells, are useful. The parallel bars afford a very fine exercise for the muscles of the body and upper limbs. Battledoor I should recommend to be played with the left hand as well as the right, a habit, like all others, acquired by due practice. While I particularly mention these, I should advise as great a diversity as possible, in exercise and amusement; so that, when the mind or the muscles get fatigued with one, they may take up another with fresh ardor. Every seminary of young persons should be provided with the instruments for these exercises. They are not expensive, occupy but little room, and are of unspeakable importance.

While active exercises should occupy time sufficient to excite the circulation, and to put in motion the organs, there must also be an occasional relaxation. At proper intervals, the whole muscular apparatus should be allowed to repose. I do not mean that the young lady should sleep during the day; but I wish to advise a graceful attitude on a couch or sofa, as a necessary alternation to muscular or mental effort.

The remarks last made have reference principally to the exercises of young ladies, who are more likely to suffer in this respect, in our plans of education, than the other sex.

The necessity of cultivating the physical powers in young men, is sufficiently understood. The establishment of gymnasia through the country, promised, at one period, the opening of a new era in physical education. The exercises were pursued with ardor, so long as their novelty lasted; but, owing to not understanding their importance, or some defect in the institutions which adopted them, they have gradually been neglected and forgotten, at least in our vicinity. The benefits which resulted from these institutions, within my personal knowledge and experience, far transcended the most sanguine expectations. I have known many instances of protracted and distressing affections wholly removed; of weakly organized forms unfolded and invigorated, and of the attain-

ment of extraordinary degrees of muscular energy and elasticity in persons in health.

The diversions of the gymnasium should constitute a regular part of the duties of all our colleges and seminaries of learning; and, to give them the requisite power of excitement, the system of rewards, so dangerous when mismanaged in literary education, might be introduced without any ill effect. Our young men may surely find time to cultivate those exercises, which Cicero and Cæsar, and some of the most studious among the ancient and modern philosophers, considered necessary, and contrived to prosecute in the midst of their studies and affairs.*

If the gymnasium is deserted because it calls for too much effort, let me intreat them at least to adopt a regular plan of walking. Two hours a day must be devoted to this business without relaxation, unless they are willing to carry the mark of disorder in the face while young, and a dyspeptic, nervous, disabled frame through that part of life, which requires health and activity.

I have often been asked, how it is the German literati preserve their health without exercise. Some of them are known to pass most of their time in study, and think not of wasting their precious moments in taking care of their bodies. To this I reply; first, that they are careful to acquire a good constitution by habits of activity while they are young. The

* Cicero is described by Plutarch, as being, at one period of his life, extremely lean and slender, and having such a weakness in his stomach, that he could eat but little, and that not till late in the evening. He travelled to Athens, however, for the recovery of his health, where his body was so strengthened by gymnastic exercises, as to become firm and robust; and his voice, which had been harsh, was thoroughly formed, and rendered sweet, full, and sonorous.

In regard to Julius Cæsar, the same author informs us, that he was originally of a slender habit of body, had a soft and white skin, was troubled with pains in his head, and subject to epilepsy; but, by continual marches, coarse diet, and frequent lodging in the fields, he struggled against these diseases; and used war, and the exercises and hardships therewith connected, as the best medicine against these indispositions.—*Sir John Sinclair.*

organs are properly developed, and confirmed in healthy action. Secondly, they do not break down their strength by luxurious ways of living, and the free use of stimulant drinks, in early age. Thirdly, which is the great secret, they live most abstemiously. The digestive organs are not overburdened with food, and stand not in need of extraordinary efforts to relieve them.

Let those who are compelled to sedentary pursuits, seasonably lay aside one half of their ordinary food; and they will experience no loss of time in combating the horrors of dyspepsia.

The inhabitants of the Philadelphia Penitentiary, confined to a uniform regimen, which of course limits itself, enjoy uninterrupted health. Those who were diseased from bad habits before they became its tenants, are effectually cured after a short residence.

Regulation of the food is of primary consequence towards the formation of a good constitution. The most common error in relation to it, consists in the use of too much food. Nature has given us organs of a certain capacity, on the presumption that, being called on to manual labor, we should then require a large quantity of food. Muscular effort exhausts the strength, and requires renovation by nutritious substances; but when the muscular efforts are small, the quantity of nourishment required is comparatively trifling; and if, in consequence of the capacity of the gastric organ, a large quantity is taken, the result will be pernicious, directly or indirectly. Parents are uneasy when their children eat but little, and would encourage them to eat against their inclination. No mistake can be more pernicious to health; and if persevered in, disease will infallibly result from it. When the child wants appetite, instead of being compelled to take food, it must be compelled to take exercise, unless positively ill, and then it must be compelled to take medicine.

The quantity of liquid given to young persons is decidedly injurious. The principal agent in the digesting process, is a sol-

vent juice. The more this is diluted with fluids, the weaker it is, and the less perfect the digestive action. Animal food should be sparingly taken by young persons who use little exercise ; and children generally do not need it. Bread and milk, and fruit are the best articles for those who do not labor. Wine is highly pernicious to young persons. It is a slow but certain poison. Before the body has attained its full growth, there is an overplus of excitability ; and if to this is added the powerful agency of wine, or any other stimulating drink, the constitution cannot fail to be hurt. Females are more injured by stimulating drinks than males, because their system is more susceptible of physical excitement. The nervous power is more energetic ; the pulse and respiration are quicker ; and the developement of animal heat greater. Hence, I suppose, it is, that they require less covering in cold weather ; and suffer more inconvenience from the heat, than the other sex.

Females are unfortunately compelled by fashion to adopt partial and unequal coverings of the body. A part of the chest is very much covered, while another part is wholly exposed. The dangers which spring from fashion are more easily pointed out, than avoided. They serve at least to place in a clearer light the necessity of inuring young females to exposure, and invigorating them by exercise.

There is one part of female dress, the dangers of which have been made known, but which still, I fear, continues to be practised ; I mean the girting the chest.

In what notions of beauty this practice took its origin, I am unable to discover. The angular projections formed by a tightly drawn cord, are in direct opposition to the models of Grecian or Roman beauty. In the flowing robes of the Juno, the Vesta and Diana, every part is light and graceful. Nor have I been able to discover, in the representation of the Muses or the Graces, any habiliment which would lead us to believe they wore stays or corsets. The taste of the other sex is uniformly opposed to the wasp-like waist and the boarded chest. Yet, strange as it seems, there is scarcely a young lady of fifteen, who

has not imbibed a disposition for this species of application, and scarcely a well dressed lady of any age, whose chest is not confined in such a manner as to impede the motions of respiration and the free use of the muscles of the upper extremities. It is true we are constantly told that they are uncomfortable without these appendages; but this only shows, what great inconveniences, we can, by habit, become accustomed to. The Indian nations, who consider the flattened forehead to be a beauty, confine the heads of their infants between two pieces of board corded together, and the child exists under this pressure and may grow up. Yet there can be no doubt that diseases are generated by it; that some lose their lives and others their intellects. Still the fashion continues from age to age; for I have now in my possession flattened heads, which must have lived some hundreds of years since, and others which have belonged to individuals of the existing generation.

Nature has so contrived the human chest that there is no superfluous play of the parts composing it. Its movements are just sufficient to give such an expansion to the lungs and such an extent of oxygenation of the blood, as are adequate to the wants of the individual, under different occurrences. In females, the chest is shorter than in males; and to compensate for this, the motion of the ribs is naturally more extensive and more frequent. Whatever limits this motion is therefore peculiarly injurious to the sex; especially as they are more disposed to consumption and other chronic affections of the lungs. Now the ligatures in the fashionable dress are placed precisely on that part, where the motion should be greatest; that is, the lower part. It is precisely here, that, in case of fracture of the ribs, when we desire to stop the movements of the chest, we apply a tight bandage;—though rarely do we venture to make it so tight as the ordinary corsets. The effect of such pressure, begun at an early period of life, will be understood from what has been stated in regard to the spine. The bones must yield to it; their shape becomes permanently altered; the lower part of the breast contracted; the space destined by na-

ture for the heart and lungs diminished ; and what the fatal results of all this on these tender and vital organs are, every day's experience shows us. The influence on the health, though slow, is certain. It may not at once produce consumption ; but it lays the foundation for ills it would pain you to hear, and me to describe. I will only say by way of specification, that, among other diseases of which this is the fruitful germ, I have known three instances of perpetual headache, at last bringing on insanity and terminating in death. The immediate cause of the disease was the compression of the heart and great blood vessels, and the consequent accumulation of blood in the head.

As young ladies are disposed to this practice, probably by fancies communicated by their companions, those who have charge of them, should not only prohibit these applications—they should, for themselves, observe whether anything is wrong ; and after the young ladies have reached the age when dress is considered a primary object, they should resolutely oppose every encroachment on the rights of the vital organs, beyond what is required by a decent attention to the prejudices of the day.

If I might call your attention to other topics of interest connected with this subject, I should advert to the constant use of cold bathing, especially the shower-bath, as very conducive to invigoration of the body and to lessening the susceptibility to the injurious effects of cold on the surface of the skin. I would speak of the advantages of regular frictions over the whole surface, and especially the chest and the neck, those parts, which are constantly to be exposed to the air. The judicious use of the voice by reading aloud, I should highly commend. It invigorates the lungs, and gives action to the whole digestive apparatus ; but I should not speak so favorably of singing—a delightful accomplishment, indeed, but only to be pursued by those whose chests are ample, and pulmonary organs vigorous. These subjects I can barely allude to, without entering into the details of their particular application,

having extended these remarks much beyond my original design.

Let me conclude by intreating your attention to a revision of the existing plans of education, in what relates to the preservation of health. Too much of the time of the better educated part of young persons, is, in my humble opinion, devoted to literary pursuits and sedentary occupations ; and too little to the acquisition of the corporeal powers indispensable to make the former practically useful. If the present system does not undergo some change, I much apprehend we shall see a degenerate and sinking race, such as came to exist among the higher classes in France, before the revolution, and such as now deforms a large part of the noblest families in Spain ; * but if, as I trust it will, the spirit of improvement, so happily awakened, continue to animate those concerned in the formation of the young members of society, we shall soon be able, I doubt not, to exhibit an active, beautiful, and wise generation, of which the age may be proud.

* I am informed, by a lady who passed a long time at the Spanish court, in a distinguished situation, that the Grandees have deteriorated by their habits of living, and the restriction of intermarriages to their own rank, to a race of dwarfs, and, though fine persons are sometimes seen among them, they, when assembled at court, appear to be a group of mannikins.

Le 15 Mars 1900

Monsieur le Ministre,

J'ai l'honneur de vous adresser ci-joint le rapport que vous m'avez demandé par votre lettre du 10 courant.

Je vous prie d'agréer, Monsieur le Ministre, l'assurance de ma haute considération.

Le Ministre des Travaux Publics,

Georges-Émile Hauser.

Enregistré le 15 Mars 1900

Le Secrétaire Général,

Paul Boyer.

MR CARTER'S LECTURE.

MR CARLTON L. L. L.

ADVERTISEMENT.

THE subject assigned to the author of the following Lecture, by the Committee of Arrangements for the late Convention of Teachers in Boston, was simply, Teaching Geography. In enforcing the claims of geography to attention as a branch of elementary instruction ; and particularly, in stating the peculiar advantages of the method of teaching it, adopted and recommended by the author, he was necessarily led to make a brief analysis of the infant mind, in order to show what intellectual powers would be successfully developed by the study. Under the impression that the Cultivation of the Intellectual Powers was to be the subject of a distinct lecture, the author, in the original preparation of his performance, felt constrained to forbear making his analysis of the mind so full and complete as his in-

clination would have prompted, lest he should encroach on the province of another. After the Convention had assembled, however, it was ascertained that the anticipated lecture on the Cultivation of the Intellectual Powers, would not be delivered, and the author was, then, invited to occupy as much of that ground as this late notice and his indispensable engagements during the sittings of the Convention, would permit. These circumstances are stated, in the hope that they will afford a sufficient apology for the great length of the lecture, and the apparent diversity of its subjects, as well as for the introduction of one or two paragraphs published by the author a few years since, in a literary periodical then under his care, and particularly devoted to the cause of popular education.

LECTURE II.

ON THE
DEVELOPEMENT OF THE INTELLECTUAL FACULTIES,
AND ON
TEACHING GEOGRAPHY.

BY JAMES G. CARTER.

BEFORE entering particularly upon the subject of Teaching Geography, I propose to offer a few remarks upon the Development of the Intellectual Faculties, as the proper purpose of early instruction or elementary studies, generally. When I enter upon the second topic of my lecture, I shall briefly trace the progress of the science of geography, if science it may be called in this humble form, to its present condition in our schools. Then I shall state one or two of the great defects, which widely prevail in the common systems upon the subject. Afterwards, I shall sketch what I conceive to be the best arrangement of elementary geographical works, and describe with some minuteness the best method of teaching them. And, lastly, I shall endeavour to illustrate the peculiar adaptation of this method of instruction to the exercise and consequent development of the various faculties of the youthful mind. Though this arrangement may divert me for a few moments from the original purpose of my lecture, yet there seems to be more than a mere propriety in it; because the mode of teaching any subject would naturally be somewhat varied according to the objects for which it was to be taught, and according to the scope and comprehension given to it.

What, then, I am led first to inquire, is the proper purpose

of early instruction or early education? At what end are parents aiming, when they lavish their cares and anxieties, and expend abundant treasures upon their children? And when may they consider their reasonable hopes as in the progress of fulfilment? What are the great body of teachers throughout our land—a profession more numerous than any other liberal profession, and requiring untold sums levied upon every class of the community for their support—endeavouring to accomplish? Why, certainly, to educate the rising generation. And what is it, the question recurs, to educate the rising generation? The answer to this momentous question is essentially involved in a preliminary and apparently more simple one;—what is it to educate successfully one individual human being? It is by counteracting adverse influences, and by the application of judicious means, to produce where it does not already exist, or to preserve where it does, a sound and healthy state of the whole body; particularly of all those parts of it, which constitute, or on which depend, the external organs of the mind,—the organs of sensation. The avenues of the mind, by which it holds intercourse with the material world, being thus cleared, it is the next business of education to present nature in its simplest forms to the incipient and undisciplined senses; to watch and regulate, by directing and strengthening the attention, the formation of the corresponding impressions, and the modifications of them by reflection; and to vary and enlarge this experience of the youthful mind, so as to call forth in their natural order its various faculties, and render them healthful and vigorous by exercise. A sound mind being thus in the progress of developement, in a sound body, *mens sana in corpore sano*, the principal remaining point of attention is simultaneously to regulate the affections of the heart,—to direct them to their proper objects; first, to those who are immediately around them,—to those earthly benefactors, whose kind offices are most obvious; and thence gradually and solemnly upward to our heavenly Benefactor: for, in the right exercise of this latter class of affections consists not only the essence of all mor-

al excellenee, but the only sure foundation of all intellectual greatness.

It will be perceived, that, in this view of the objects of early instruction, I have said nothing of imparting knowledge,—even of useful knowledge. And who that has reflected much upon the subject, will say, that it is the sole, or even a main subject of early and elementary education to fill the mind with facts, be they as useful in themselves or practical as they may? Who has not seen, even in this practical age, too many living examples that knowledge of facts is not wisdom,—that it is very possible to store the mind of a child or youth with a vast amount of learning, and yet leave him but poorly educated? But limited and superficial as his views of the science of education must be, who could for a moment think of estimating his success in instruction by the amount of knowledge imparted? At what other objects do teachers generally, and the prevailing systems of instruction, seem to aim? Or by what other standard do parents and the public estimate the abilities and success of a teacher?

So far is the acquisition of knowledge from being the main object of early or elementary instruction, that it is not, in my view, even the best criterion by which to judge of an individual's progress in education. Although it would not be possible to regulate the external impressions upon the infant mind, or the modifications of those impressions formed in the mind itself, in the course of its developement, so as not to give it much knowledge both of the natural and the intellectual world; yet, I apprehend, this knowledge, useful and important as it may be, is only to be considered as incidental to education, or at most but accessory to it. The main object, so far as it can be influenced by any direct efforts of parents and teachers, is, the successful developement and discipline of the several moral and intellectual faculties of man, in their natural order, and each to its due degree of strength and maturity. All other objects, about which the busy writers and talkers upon education are so much en-

gaged, are but subsidiary to this. They are, therefore, to be regarded only as means, and are important or pernicious in a course of instruction, just in proportion as they tend to facilitate or retard the attainment of an ulterior and higher purpose. That youth is not necessarily the best educated, who knows the most, or knows that which will be most useful in his intended situation, or even who knows it most thoroughly ; but he whose faculties,—physical, intellectual, and moral,—are most perfectly developed. These constitute the man, and give him his own individual and peculiar character. It is by means of these, and these only, that he will be able to learn a profession, to acquire knowledge, and make himself estimable by his virtues. And every arrangement of studies and every plan for the education of children and youth, which makes not the development of the faculties and the enlargement of the natural capabilities of our nature, its main aim, seems to me to be essentially defective. And every parent and instructor of youth, who keeps not this aim constantly in view, and makes not his arrangements, and directs not his discipline accordingly, is in imminent peril of wasting, or probably worse than wasting, his efforts.

In vain will you put into the head of a child the elements of all the sciences ; in vain will you flatter yourselves that you have made him understand them. If there has been no endeavour to develop his faculties by continual yet moderate exercise, suited to the yet weak state of his organs, if no care has been taken to preserve their just balance, so that no one may be greatly improved at the expense of the rest, your child will have neither genius nor capacity ; he will not think for himself ; he will judge only after others ; he will have neither taste, nor intelligence, nor nice apprehension ; he will be fit for nothing great or profound ; always superficial ; learned, perhaps, in appearance, but never original, and perpetually embarrassed, whenever he is put out of the beaten track ; he will live only by his memory, which has been diligently culti-

vated, and all his other faculties will remain as it were extinct or torpid.*

The powers and faculties of our nature, physical, intellectual, and moral, are developed only by slow degrees and by repeated and varied opportunities for exercise. These opportunities for the exercise of our powers in the very earliest stages of education, are afforded in the ordinary course of nature without any direct efforts of parents or teachers. And a kind arrangement of Providence it is, to check our presumption, and prevent the rude interference of men with the delicate and subtile operations of this noblest work of God. But soon, man has a part to take in the most momentous and responsible business of giving form and direction to the opening faculties of a fellow being. And it becomes him to approach his duty in this regard with great deliberation, and with that awe, which he cannot but feel, when he reflects that he is about to blend his imperfect means with his Maker's, and co-operate with Him in giving form and character to an immortal mind.

The organs of sensation, only, are born with us; their use, which alone gives them their value, is acquired by intercourse with the material world. And this intercourse is carried on, partly in the ordinary course of nature, above and beyond the reach of human interference; and partly by means, which lie distinctly within the sphere of our control. The child hears, sees, and feels things as they are, only by practice, by repeated efforts, trials, and alternate failures and successes. It walks not with a firm and elastic step, till the several muscular organs employed in the operation have been disciplined, tried and strengthened, one by one, and in more limited combinations; nor even then, till large experience and many failures have taught it where greater strength and agility are wanting. It walks and moves not gracefully, till a still later peri-

* See 'Journal de Genève,' 1790. also 'Bibliothèque Universelle' of Professor Pictet, Feb. 1817.

od,—till it feels the luxury of a perfect control of all the muscles and limbs of the body.

So it is in the developement of the several intellectual faculties. No one of them is born with us, nor have we even an idea, upon which they may employ themselves, till the material world is presented to the physical senses. They are brought out but gradually, by slow degrees and by gentle use; and they are prepared for high and masculine efforts, only by a long series of healthful and vigorous exercises. We have not the power of steadfast attention, till we have been baffled many times by its waywardness. We are not quick in comprehending, exact in reasoning, sound in judgment, sagacious and original in invention, till we have much exercised, one by one, and in their more limited combinations, all the elementary powers of mind, on which its highest efforts, of course, essentially depend.

The affections, and all our moral faculties, too, on the character and exercise of which depend not only the well-being of society, but all the absorbing interests of the individual, are not less the creatures of habit; which is only the results of education, in its widest sense, combined. Where exists, but in the benevolence of God, filial affection, till it is called into exercise by the mother's smiles? How can we conceive of gratitude, and how does that affection receive a character and become a habit within us, till our hearts have been touched by the varied and repeated tokens of kindness in those about us? How does it receive its highest and holiest direction, till we have largely experienced and deeply realized that protection and those mercies, which men cannot give? Or how do our hearts rise spontaneously upward in prayer, till we have been placed in circumstances beyond the control of human means, and perhaps beyond the reach of human sympathy, and there felt the utter impotency of man to relieve our keenest wants, or satisfy our highest aspirations?

I have, perhaps, said more than enough to bring before my fellow laborers in the cause of education, some of the main

grounds of my belief, that the prevailing systems of instruction have been formed upon a somewhat mistaken principle ; that the selection of subjects on which to employ the young and tender minds of children, and the arrangement of those subjects in our text-books, have been too often made with reference to what I cannot but consider a mistaken purpose of elementary studies. They seem to have been made upon the supposition, that the acquisition of knowledge is everything, and the discipline of the mind nothing ; or, at best, that the acquisition of knowledge is the main thing, and the discipline of the mind a secondary or subsidiary consideration, which may be regarded or neglected without essentially affecting a system of instruction. Now, if the principles I have stated be correct, these two purposes of early education have been misplaced in regard to each other. The discipline of the faculties is the main and legitimate object of elementary instruction ; and the acquisition of knowledge is a secondary and inferior consideration, which may be, and should be, neglected, whenever it would interfere with the main aim. When professional education begins, the main object of instruction is changed. The faculties being fully and harmoniously developed, the individual now properly seeks to acquire that knowledge, which will be most useful to him in his intended course.

I have thought it worth while to be thus explicit in stating the proper purposes of elementary studies ; because, in forming plans and devising means for the attainment of any remote object, it is the part of wisdom first to place the object itself as distinctly in view as its nature will admit. With a clear and well defined idea of what we would attain, constantly in the mind, we shall be much less liable to mistakes, either in our choice of means to be used, or in our manner of applying them. The necessity of this cautious mode of settling a plan of operations becomes more obvious, just in proportion to the remoteness of the object, and the variety of the means to be used for its attainment. It must, therefore, be peculiarly important in devising and adopting a system of practi-

cal education. For here, no reasonable parent or teacher looks for a conclusive result of his labors, till the object of his solicitude has taken his place among the busy actors in the scene of life. Indeed, though we may see enough in the progress of education to inspire us with high hopes, or fill us with painful apprehensions for the result of our efforts, we cannot know the full measure of our success or failure till a decision is made upon the characters of the immortal beings, we have contributed to form, beyond the grave.

The means to be used, too, in the education of the young, requiring a cool and watchful discretion in their selection, as well as in the time and manner of their application, are as various as the forms of visible creation,—infinite, even, as the states of the ever changing spirits within us.

If this view of the proper object of elementary instruction be correct, the foundations of the science of intellectual and moral education, are to be found in the phenomena and principles of the infant mind. And a deep and thorough knowledge of these is as essential to the accomplished and scientific instructor, as the maxims of a system of morals are to the moralist, or the definitions and axioms of mathematics are to the mathematician. The foundation of a teacher's professional skill being laid in an intimate acquaintance with the condition, states, and wants of the youthful mind, and his object being the developement of all its powers and faculties, in their natural order, and each to its due degree of strength and maturity—the superstructure of his science must embrace a thorough knowledge of the various means, direct and indirect, suitable to be used in the attainment of the desired end.

It will at once be perceived that I do not pretend to have found out, either for pupil or for teacher, any royal road to learning. No such thing. On the contrary, though I have laid down principles, which would somewhat smooth the way for pupils, I have greatly magnified the duties and the responsibilities of the teacher. And I hope something may be found in the remarks I have made and may hereafter make, to dis-

courage the temerity of inexperienced teachers in assuming the labors of a profession, upon which they have never bestowed a thought, and for which, of course, they are totally, totally unfit. What! will you require a seven years' apprenticeship, before you will allow a man to drive a nail in the shoe of a horse's foot, or set a stitch in the shoe of your own foot, and yet commit the training of an immortal mind to one who has served no apprenticeship? Will you always be so inconsistent as to lay your hands upon the heads of little children, and invoke the blessing of Heaven upon them, and then send them to a knave to learn morality—a debauchee to learn chastity—or a dunce to learn philosophy? I hardly know which most astonishes me, the presumption which ventures heedlessly upon such high responsibilities, or the folly and inconsistency of parents in committing their children to be educated, to those who can know nothing of their business and duties. I do believe the time is coming, when a more due estimate will be formed both of the difficulties of conducting education, and the consequence to be attached to those who do it successfully. I do believe the time is coming, when he, who has devised means for enlarging the capacities of happiness both here, and hereafter, will be considered as great a benefactor, as he who has invented gunpowder or engines for destroying them.

The study of the youthful mind, the first branch of the science of education, or of a teacher's preparation for his profession, is one of uncommon difficulty. It is not an easy matter to analyze the infant mind, even so far as to enumerate its elementary powers, and state the natural order of their developement, and their mutual connexion and dependence, with intelligible precision. However interesting and alluring it may be, I am not about to make a deliberate essay upon this virgin field of philosophy; nor shall I even enter it, farther than by and by to describe a few of those powers, which I think the correct method of studying geography peculiarly adapted to develop.

It may be new to some of my hearers, even now, to hear

the subject of education spoken of as a science.* I am sure it was new to me but a few years ago. And it must be confessed that the term is applied to it, rather in consideration of

* For the leading reflections contained in this and some of the subsequent paragraphs, the reader is referred to an article, published by the author, in the United States Literary Gazette for Dec. 1, 1825. The author takes the liberty to add in this form, and as pertinent to the subject brought under discussion in this part of the lecture, the following remarks published by him, in the same article, to which he has already referred.

‘We hold and have held for many years, undoubting belief that the science of education is capable of being reduced, like other sciences, to general principles. By a particular induction, or a long series of discriminating observations, the infant mind may be so far analyzed or its phenomena classed, as to enable us not only to define accurately its several powers with their mutual connexions and dependences, but to fix with precision the natural order of their developement, and to adapt to them such exercises as will develop them most successfully. It might perhaps seem presumption to call in question the axioms of the science; and it certainly would not be easy to point out in a few words the false principles which lie at the foundation of our systems of instruction. Moreover, we should not lightly undertake to calculate the perplexity, and time, and perversion of talents they cost the young—the waste of money they cost parents and the public,—and the waste of patient and laborious effort they cost instructors. We shall name only two false principles, which seem to us to lie at the root of the matter, believing that if they could be reformed the whole subject would assume a new aspect.

‘1st. Education is understood to consist in the acquisition of knowledge. This we infer from the pompous catalogues of books and subjects, which are arrayed and set forth as constituting the course of every petty school in the land. They are subjects oftentimes for which the youthful mind is not at all prepared, and by which of course it must be baffled and discouraged. When a subject is presented to a pupil, which requires the exercise of an intellectual faculty not yet developed, he must be as much confused as a blind man would be, if called upon to criticise colors. Education, we believe, at least elementary education, does not consist in the acquisition of knowledge, but in the developement of mind. And subjects should be selected and arranged with reference to this object, the acquisition of knowledge being only incidental.

‘2. When the subjects are selected, perhaps judiciously, they are presented in a form which neither affords a salutary discipline to the mind, nor facilitates the acquisition of knowledge. They are all too abstract, or are generalizations of facts, which are themselves unknown to the pupil. Particularly the whole course of the physical and exact sciences, to use a common but expressive phrase, come precisely the wrong end foremost,—first

what it should be, than of what it really is, or is understood to be, even by some who have been long engaged in its practical details. But is it incredible or even improbable, that a new science may yet be disclosed? The searching spirit which is abroad, has developed within a few years several new sciences, which before were almost unknown, or were made up of a few scattered facts, and those not systematically arranged, or reduced to any general principles. Within the short period of my recollection, political economy was despatched in a few paragraphs under some subdivision of the science of politics. Geology and mineralogy have recently sprung up and assumed the dignity of separate sciences. And chemistry has declared independence of natural philosophy. These are now, all of them, sciences, which are found to have important bearings upon the interests of society; and all of them are sciences, which now engross a liberal share of the public attention. And even these may be again subdivided, and others spring out of them which do not now exist even in the imaginations of men.

the general principle, then the particular instances illustrating it. Lord Bacon has taught us that this is not the method by which the human mind takes in knowledge, and it is time we had attended to his instructions. Upon all new subjects of which we have no knowledge or experience, we must first have the particular cases, instances, or facts, abstracting the qualities or points of resemblance, common to them all; then a description of those qualities or points of resemblance, which constitute a general principle.

‘We have no room to enlarge upon these topics, but believe they will be found to reach the evils and defects, which have been so long and so severely felt. For, if the purpose of early education be the developement and discipline of the mind, then all subjects must be selected and arranged with reference to this purpose. And if Lord Bacon’s philosophy is sound; then the subjects so selected and arranged must be put in that form, in which alone the mind can successfully encounter them.

‘If these views are correct, and these principles philosophical,—and we do not see how any one can doubt that they are so,—the question occurs, how they can soonest be developed in all their details; and be made thoroughly effective in all our public as well as private instruction. It seems to us, as we have before intimated, that it can only be done by making the subject the ground of a distinct profession.’

So I believe it will be with education as a branch of moral and intellectual philosophy. There is a whole science wrapped up in that mysterious thing, the infant mind, which has never been developed, nay, hardly yet been discovered to exist;—a science, too, which will have a stronger influence upon the condition and prospects of men than any other. I say a stronger influence, because it relates to that part of ourselves which is susceptible of the highest, perhaps of indefinite improvement, at a period of our lives when every bias is soonest felt, and every impression made, most permanently remains; and because it has for its object to call forth those moral and intellectual powers, that constitute the very instruments with which we must proceed to accomplish whatever is within the reach of man.

Moral philosophy has been studied, reduced to principle, and inculcated in all systems of public instruction; but it only teaches *men* their duty and the reason of it. We have a moral nature and moral feelings, which are susceptible of influence, developement, and direction, by a series of means, before we can reason upon them ourselves. This is the field for the moral philosophy of education. It opens almost with our existence, and extends through all the stages of childhood and youth, till our intellectual faculties are so far developed as to enable us to excite, suppress and control our feelings, and regulate our actions with a reference to distant motives. Then we may begin the *study* of moral philosophy. Before that time we must act from motives, placed before us by those who control our education, without being able to comprehend the ultimate tendency or the reason of our actions; and his moral education is most perfect, whose feelings and habits are so formed, that he needs not to change them when his reason comes to decide upon their fitness with reference to his being's end and aim. The skill of the instructor, therefore, in this department of education, consists in comprehending the temperament and disposition of his pupil, and in addressing those motives only to him, which will induce such actions as he approves, and lead

to the formation of such habits as he wishes to establish. If this view of the subject be correct, it must occur to every one, that there are several stages in the development of our moral nature, and the formation of our moral character, which have never been subjected to a sufficiently minute and rigid examination.

General principles in the moral education of youth, must be established, like all other general principles, by a regular process of induction. And in order to this, a great variety of particular cases must occur, and a great many discriminating observations be made; or, in other words, we must have at hand large experience either of our own, or of those upon whose observations we may safely rely. With sufficient materials for philosophy, or the necessary facts of the case, I know not why we may not establish general principles upon this subject as well as upon any other of a similar nature. And when they are so established, they must be of incalculable utility to those of slight experience in the management and government of youth; and such there must always be, while men attain only to threescore years and ten.

Metaphysicians have analyzed the human mind often enough, and perhaps minutely enough; but it has always been the mind in a state of maturity. This class of philosophers always open their subject, and vindicate its claims to extraordinary dignity, by saying that the materials to be analyzed and the instruments to be employed upon them are all within themselves. So indeed they are within themselves. And for that very reason they describe only those faculties and those operations, of which no one can be conscious, whose mind is not yet in the same advanced stage of development. But there is a series of years, and important years, in our education, of the intellectual operations peculiar to which we can in manhood have no recollection, and of which we can form no adequate conceptions by reference to the operations of a mature mind under similar circumstances. The analogy between the feeble and fluttering motions of an infant mind, with its faculties partially and

unequally developed, and the steady operations of a mature one in full and vigorous action, is by no means so close as to enable us to infer, that what is true of the latter will necessarily be so of the former. The kind of evidence, on which our general principles are to be formed, in the two cases, is almost entirely different. When we attempt to describe the operations of a mature mind, we do it by a *consciousness* of the movements of our own minds under given circumstances; and we strengthen our conclusions by appealing to the *consciousness* of other mature minds under the same circumstances. But whatever we learn of the intellectual habits of children we must learn by very different means. Our own consciousness will do no more than suggest the direction of our inquiries; and we cannot appeal to the consciousness of the child, because it has not yet learned to call off its attention from the external objects of sensation and fix them upon the operations of its own mind; much less has it learned the language suitable to convey to another, ideas, which it has not yet itself received.

Here, then, although the instruments of observation, to use the language of metaphysicians, are within the philosopher, the subject upon which they are to be employed, is not. And this important circumstance constitutes the difference between the science of metaphysics, as it has usually been understood and defined, and the new branch of it, which is about to be developed as the *basis* of the science of education. Nature proceeds by uniform laws in the developement of the infant mind as well as in everything else. What then are these laws, and how shall we trace them? This is a field where there is scope for the exercise of the highest degrees of discrimination and sagacity. Before we can approach with any degree of rational confidence to conclusions in regard to the operations of a child's mind, we must direct the most patient and scrutinizing observations to all the external indications of thought; such as broken sentences, to be made intelligible only by our own ingenuity; the words; the actions; the unconsciously changing countenance, and the beaming eye.

We are upon a level far above the object of our severe scrutiny, and must look down upon its shadowy, complicated, and varying operations, as we look down upon a landscape, whose shades and lines are almost too minute to be traced by our blunted sight. We must observe and arrange, by our own ingenuity, the circumstances which excite it, and trace its operations, or rather the results of its operations, when it is excited, somewhat as we observe phenomena and trace laws in chemistry, by noticing the results of given combinations of elements, when we cannot see the operations going on, or comprehend the mode of them.

What may be the effects of a full developement of the science of education, upon our present systems and modes of instruction, cannot be foreseen. For, that sagacity, which could foretell and minutely describe the changes and improvements that are to be made, would almost necessarily make them. The developement of a new science in all its ramifications and details, must be a slow process, and the work of many minds. But the work is already begun; ay, and it is going forward with a motion as steady and irresistible as that of the spheres. The advances are, indeed, as yet almost unseen; for our systems of instruction, it must be confessed, remain, in almost all essential particulars, as they were left by the revival of letters two centuries ago. But they are now undergoing a severe ordeal; a test, which they cannot stand. The focus of public opinion is upon them; and we have only to hold steady our broad lens, and they must give way. If one effect of the discussions, which are now going on, should be a thorough conviction, that the legitimate purpose of elementary studies is the discipline and developement of the faculties, rather than the acquisition of knowledge, this change of the main object of early education, would necessarily bring in its train, great changes of some kind, both in the subjects to be taught, and in the manner of teaching them. I do not by any means despair of seeing this principle prevail. Indeed, I as firmly believe, as I ardently hope, that the time is soon coming, when

we shall see it carried out into all its practical details, not only in our higher schools, but in every common school throughout this wide-spread empire. And then, instead of seeing classes called up, one after another, to exhibit their proficiency in the acquisition of a knowledge of grammar, or rhetoric, or logic, or astronomy, we shall see them classed according to the developement of their minds. And their exhibitions will be so conducted as to show the progress made in the development and discipline of this or that intellectual faculty. The instructresses of our infant and common schools, will then present their younger classes for examination, and at the same time state to their employers or examiners, that the children are very young, and have been in school but a short time; that they have attended mainly to the developement and discipline of the five *senses*, more particularly, perhaps, to the senses of hearing, seeing, and feeling; that to discipline these senses, they have used such and such means, or exercised them upon such and such subjects. Then she will proceed to exhibit the result of her skill, by showing the strength and accuracy of the several senses in question, by practical examples. No matter, not the least, whether the children have learned to name the senses. They had better learn to use them than to name them. They had better, for the present, learn the names of external objects, and let impalpable abstractions alone.

That the senses are susceptible of cultivation and improvement, even in manhood, admits of no doubt; much more are they so in childhood. But they can be brought to perfection only by repeated exercises adapted to each one of them. Here nature does, indeed, somewhat relieve our ignorance; for the variety of objects and occasions for the use of the senses presented to a child, in almost any situation, are sufficient for the training of the senses, in some degree, to their proper use. But we may, and do frequently, detect one or more of the senses in delinquency. It is then, that skill in the science of education can be most efficaciously applied. The delinquent must be sought out with the keenest scrutiny, and appealed to frequent-

ly and earnestly, till it habitually and perfectly performs its proper function.

Having exhibited the proficiency of her youngest class, our instructress will then introduce one a little older, and state to her employers, that this class, having all their senses accurate, developed in harmonious proportion, and each to a considerable degree of strength, has been attending to the cultivation of *perception*, or of the perceptive powers. Their exercises have of course involved those of the preceding and younger class. She will then proceed to exhibit their proficiency, by showing, by examples, with how slight opportunities for sensations they will get distinct perceptions of things.

Upon the vividness of the sensations, to which I have already alluded, depends, in a considerable degree, the accuracy of the consequent perceptions and ideas. These constitute the first furniture of the mind, and the materials for all mental effort. And if they be loose and unformed, not only will all the subsequent modifications of them, and conclusions derived from them by the higher mental operations, be unsatisfactory and unsafe, as modes of belief and rules of action ; but the powers of the mind themselves, will receive the greatest detriment from being employed upon poor materials. If the very elements of knowledge are so compounded of truth and error, no wonder so much of the latter ingredient remains to be eradicated in later life by bitter experience ; and that the mind itself, from long familiarity with the compound, loses the power of nice discrimination between the component parts.

The cultivation of the perceptive powers, therefore, should begin with the very dawn of intellect, and extend through all subsequent stages of education. Both the power and the habit of getting clear perceptions of all objects and upon all subjects presented to the youthful mind, are absolutely essential to the perfect developement of the later and higher intellectual faculties, as well as to the rapid and easy acquisition of knowledge. To this part of mental culture should be attached the very highest importance, and to it should be directed our earliest

and steadiest efforts. Our ultimate success in aiding and directing the developement of a youthful mind, is essentially involved in the degree of perfection, to which we can bring it, in habitually forming clear and distinct perceptions of things.

Though sensation, to a certain degree, at least so far as external objects affect the mind, is essential to every perception, yet, I apprehend, clearness of perfection, as a habit, generally depends much more upon attention than sensation. And this brings the formation of the habit more completely within the control of judicious means of education ; for no power or habit is susceptible of more cultivation than that of attention. All children, at least so far as my observation and experience have extended, have sensations vivid enough for the ground of distinct perceptions, if they are properly attended to. The pupil, for example, immured in a close and uncomfortable school-room, never mistakes the number of strokes of the clock which is to set him free ; though the same sounds, and even much louder, will often pass unheeded, when he is more agreeably employed. The reason is obvious. In one case the sensation is attended to ; in the other, not. So we often see children, and youth, and even men, of the most lively habits, and apparently of the quickest sensations, have the most confused perceptions imaginable. The reason is equally obvious. The sensations succeed each other with such rapidity, that they are blended one with another. The volatile and lively mind glances a hasty and wavering attention over the whole, but does not dwell long enough upon any particular part, to get a distinct impression of it ; while he of slower mould and duller sensations, having learned the necessity of making the most of them, will carry away from the observation of the same object, under the same circumstances, a very distinct perception.

This distinction in the intellectual habits of children, is among the first that appears, and seems to spring originally and chiefly from physical causes. In its turn, it becomes itself a cause, and gives rise, more than any other single one, to that infinite diversity of talent and disposition, discoverable

among men. This view of the origin of habits of confused perception, suggests the different courses of discipline, to be adopted with each class of individuals, as the confusion arises from too dull sensations, or too fickle attention. The child whose sensations are constitutionally dull, requires to be aroused and stimulated by gentle excitements, not only that his sensations may be more vivid, but that, by increased efforts of attention, he may make the most of them, defective as they are, in obtaining clear perceptions; while the child of lively habits and quick sensations, requires to have all excitements taken away, even those he may create for himself. For the very difficulty lies in the flickering attention arising from excessive excitement and sensitiveness. The latter is by far the most common fault of youthful minds, and requires the utmost skill for its modification and correction. And what will you do to correct it? Will you treat it harshly? Will you lay a weight of unyielding restraint upon this tender little being, and thus, as it were, grind to powder a germ of intellect? Oh no! God forbid! It is an immortal mind! We must deal gently and carefully with it; for our impressions upon it are indelible as eternity is enduring.

These obstacles to clear perceptions vary so infinitely, both in kind and degree, in different individuals, that we cannot rationally hope wholly to remove them by any general principle applied without discrimination to large classes. We may do much to strengthen and confirm habits already formed in the youthful mind, by the courses of discipline pupils are subjected to in classes or large numbers; but the habits must be commenced by particular attention to the condition of every individual mind. We must rely chiefly, therefore, on our personal intercourse with individuals, for discovering their wants and weaknesses, and applying the proper remedies, suggested by the peculiar circumstances of each case. If, for example, you have in hand a pupil, or a class of pupils, of sluggish mould, and apparently of dull sensations, and would form in them the habit of clear perception, seize an opportunity in your daily

intercourse with them to take them up with considerable promptness and energy in your manner, to some striking but complex object of sense. They will irresistibly imbibe somewhat of your own spirit and energy from example, contact, and sympathy. Direct this attention to the object, and if you would produce a little more excitement, limit the time allowed for getting a precise idea of all its parts, or suspend some consequence upon success, and then require a description of the whole. You will gain something by every instance of such discipline ; and the pleasure of success will soon aid you so far as to set your pupils upon trying the same exercise by themselves.

On the other hand, if you would form the same habit of clear perceptions, in a pupil whose confused perceptions arise from volatility,—and this is the common fault,—you should, with a very cool and deliberate manner, request him to observe some complex object, and with plenty of time before you, to enumerate with great minuteness and describe with great precision, in the presence of the object, all its parts. He would soon learn that a gleam of general attention to the whole would not answer his purpose. He must fix his mind, with unfaltering energy, successively upon every minute part of a complex object, before he can obtain perceptions of them all, with their relations to each other, so distinct as to enable him to describe them intelligibly, even while the object itself is before him to attract his fluttering attention and refresh his confused sensations. At a later period, and when the difficulty has been partially conquered, you may gradually withdraw the external object from the senses, and require of your pupil a description scrupulously exact, from his conceptions alone.

I have spoken of sensation and perception, and shown their susceptibility of cultivation, especially in the early stages of education. I have noticed the importance of those powers, as the foundation of intellectual and moral culture, and alluded briefly to some of the means, by which we may hope to develop them. But though the degree of perfection, in which

these powers are possessed by any individual, will indicate, with considerable precision, the strength and energy of his mind, they are not more important to him than *attention*, which we may suppose would be the next in order to receive cultivation. If there be any power of the youthful mind more completely within the control of judicious means of education, or more essential to the healthful developement of the higher faculties, and to the easy and rapid acquisition of knowledge, than others, it is the power of voluntary attention. However perfectly all other powers and faculties may be possessed, the mind can do but little, without the direction of this severe and wary controller of its movements. The effectiveness of an army, depends not more upon having its able-bodied men subjected to the command of a skilful general, than the energy of a mind does upon having its faculties under the control of voluntary attention. We should hardly exaggerate the importance of this power of the mind, if we should say, that the main business of early education consisted in watching the natural developement of the other faculties, and subjecting them, as they rise, to the control of attention.

No time of the pupil and no pains of the teacher, therefore, are wasted, if judiciously appropriated to the cultivation of the power and the formation of the habit of attention. And while engaged in exercises upon any subject for this purpose, all considerations of the value in itself of that subject, or the acquisition made in it, should give place to the precise object in view. Considering its importance, we deserve, and considering the difficulty of its attainment, we need, all the aids we can derive from every quarter. Not among the least of these is it to take subjects for the mental exercises, designed to cultivate attention, in themselves interesting. For no principle in education is more obvious, upon the slightest consideration, than that the mind is most easily fixed upon what is most agreeable to it. It should be a prominent motive, therefore, in the selection of topics on which to employ the minds of young pupils, to take such as interest them. No matter what the

subject is, if it be but attractive. It is chiefly through inattention to this plainest principle of education, that so many youths pass the period of all direct instruction, with such a feeble control of their own minds. We certainly discover great diversities in the interest, which children and youth manifest in different objects of nature, as well as in different subjects of speculation ; and though their taste may not seem to mature minds the best, and though they may not be able to give any satisfactory reason for their choice, it is the part of wisdom to indulge, for a season, even their caprice. We want the control of their attention, and we must have it, at almost any sacrifice of time. If a horse, unaccustomed to the bit, will not, at first, move with us in the precise direction we wish, we allow him to prance and curvet and to take his own course, till he has learned to submit to the bit and to bear us ; then we can easily turn him where we wish. And it will be a matter of but small concern, if he have, in the course of his discipline, carried us a few miles out of our way, provided we secure by the sacrifice a perfect control of him during the remainder of his life.

But though the interest of the pupil in what he may be employed upon, be essential to the successful cultivation of the power of attention, fewer sacrifices in the choice of subjects will be necessary to secure it, than might at first be imagined. For the interest of the youthful mind depends much more upon the obvious aspect of an object than upon its nature. Hence the skill of the teacher lies in always placing the learner on the sunny side of what he would secure his attention to. So in a later period of education, when the thoughts begin to grow discursive, and to range through wider fields of observation and experience, the chief interest felt by the pupil in the various subjects presented to him for reflection and speculation, depends upon the view he takes of them, and the associations he forms with them. Hence the efforts of the teacher should be directed to making the associations with a subject in which he would create an interest, agreeable. And in order to effect

this, he should, if possible, and it generally is possible, display some more or less immediate practical bearing of it upon the pupil's own happiness. Subjects not naturally interesting may frequently, by the exercise of a little discretion of the teacher, in forming associations with them, become so, or at least not intolerably revolting.

The power of attention is most successfully cultivated in the early stages of education, by employing the mind upon objects of sense. Every part of the sensible creation has the charm of novelty to the infant mind; and the eagerness, with which it flies from one thing to another, shows how strongly it is attracted by new objects, and how much it is predisposed by curiosity to rest upon them. But the very freshness of nature, and particularly of animated nature, which proves so attractive to the untrained senses and the opening faculties of the mind, is also a warning to us not to attempt to keep the attention long upon the same object. A child is incapable, however interesting the object may be at first, of long continued and undivided attention to it. It is the part of wisdom, therefore, to yield to the teachings of nature, and not attempt to counteract her laws by requiring long efforts of the youthful mind upon the same thing. Children have a natural aversion, too, to rigid system in their mental as well as in their physical exercises, because the very novelty of objects and of the motions of the muscular organs, is constantly attracting them in every direction; and as the combinations of these are infinite in variety, they war effectually against all rules, till novelty is by degrees abated by experience. The power of attention is often weakened by requiring its exercise too long upon the same thing. Every attempt to fix the mind upon an object, beyond the point when interest declines and fatigue begins, will not only fail, but the very restraint forms a disagreeable association, which will render the next effort more unpleasant and consequently less likely to succeed.

Children rush with animated gambols and shouting from the mental exercises of the school-room into the open air, not

because there is naturally more pleasure in the motions of the body than in those of the mind,—this would be a reflection upon the wisdom and the goodness of God, and is absurd on the very face of it,—but because they are generally free from rigid system in their physical exercises, and may take what course best pleases them; while the school-room is rendered intolerable to them by its restraints upon their restless spirits, by the rigidity of its rules, the sternness and tyranny with which they are executed, or perhaps the cruelty with which their slightest violation is avenged. These all form disagreeable associations with mental exercises, which no skill in the teacher can wholly counteract. Hence the buoyant and elastic spirits, which rebound from the leaden atmosphere of the school-room with such irregular explosions, are instantly quelled and compressed by the summons to their disagreeable duty. At the first stroke of the bell, which subjects them to rules, their joyful countenances assume the air of one without hope. And they return to duty in a procession as solemn as one of friars, and with much the same feelings as we may suppose to animate the affected solemnity of the professional mourners of Italy.

Though the commencement of the formation of the habit of attention must be made by means of sensible objects, a second stage in the process soon succeeds, when we must take subjects which are of a mixed nature, requiring the exercise of attention partly upon ideas of reflection and partly upon those of sensation. The pupil is now supposed to have acquired a considerable stock of ideas from external objects, and to have performed many operations upon them in his own mind. He can now hold his mind for very short periods upon trains of thought, when all objects of sense are withdrawn; nevertheless, he requires the aid of sensation, if an effort of attention be demanded for any considerable time. And by such means the mind may be kept steadily upon trains of thought much longer than could otherwise be done.

Habits of attention for short periods of time, are early and

naturally formed in children, by exercising their minds upon those objects of sense which interest them. But these feeble habits are usually destroyed or very much impaired by teachers, as soon as they begin the work of systematic education. For they make a sudden transition from exercises of the mind wholly upon objects or ideas of sense, to those upon ideas of memory or reflection; and seem to expect the same degree of continued attention to the latter, which has hitherto been paid only to the former. I once knew a little child taken from his toys and playthings in the nursery, and sent to school for the first time without a knowledge of his letters. His teacher, a gentleman of liberal education and of distinguished attainments as a scholar, marked off the seven first letters of the alphabet, and sent our little pupil to his seat to learn his lesson. Do you think it strange that the child found it difficult to confine his attention to his book?

This is unreasonable. The principal means of exciting an interest, and thereby keeping up the attention, has been suddenly withdrawn, viz. the sensations produced by the presence of interesting external objects. The transition should be more gradual. While the subjects, upon which the minds of children are employed, before what is called direct instruction begins, are almost exclusively those arising immediately from the objects of sense presented to them, those employed by teachers in their instruction are as exclusively abstract. The moment the child passes from the hand of his parent to that of a professed teacher, the requisitions upon his attention are greatly increased, while his facilities for yielding it are diminished. A disagreeable association is thus formed by the pupil with everything and everybody, which has been thus accessory to making him unhappy; and all the ordinary means of overcoming the association increase rather than weaken it, till that common consummation arrives—the proverbial irksomeness of study.

I have described the powers of *sensation*, *perception*, and *attention*, and discussed, in general terms, some of the means to

develope and improve them. I have been more copious, perhaps, than courtesy to your patience would have suggested ; but certainly more brief than the interest and importance of the subjects demand. I could have wished time and strength to discuss in this connexion, also, the powers of *memory*, *conception*, and *judgment*, as among those early faculties of the mind, which I think the study of geography upon the correct principle is peculiarly adapted to develope. But the extent of the subject seems more suited to the purpose of a treatise than the compass of a lecture. And the length to which my more general remarks, and my imperfect analysis of these few powers of the mind, have carried me, warns me to presume no longer upon your patience, but to proceed to the consideration of the subject of geography, and the best method of teaching it.

In this part of my lecture, particularly, I shall endeavour to be plain and practical, even at the expense of every other consideration. I must here also necessarily adopt the ideas, and, perhaps, I shall in some instances use the same language, which I have before used and published, more than six years ago. If I should, and what I say have not the charm of novelty with all who hear me, I trust it will be a sufficient apology for me to state, that I have nothing better to say upon this subject now than I said then, and that it seems necessary something should be said upon the point, in this place.

Children are very early capable of describing the places, mountains, and rivers, which pass under their inspection. And they commonly do it with an enthusiasm, which shows how lively an interest they take in the subject, and how deep an impression the peculiarities of new places make upon them. 'Oh ! father, we saw a great river three times as wide as our river.' This is the common language of little children, and when they have thus learned, by actual *perception*, a few of the features of the face of the earth, at a period a little later they are capable of feeling a similar interest in forming a *conception* of places, mountains, and rivers, from representation and description. Then may with propriety commence the

study of geography ; because then they can understand it, if it is presented to their minds in its simplest forms.

This is an elementary study, which has been more neglected, till within a few years, than its importance deserves, whether we consider the value of the knowledge obtained, or whether we consider the adaptation of the study to the early development of the mind. As commerce and letters multiply the mutual interests, relations, and dependences of distant places, and especially as the facilities of intercourse among them are increased, some knowledge of those places becomes almost indispensable to all professions and classes of society.

Till within a few years, however, there has been but little order in the arrangement of the books, which could be used as text-books. Facts and descriptions were selected with no very great care or attention to their importance, and with less, if possible, to their authenticity. These materials were thrown together upon some plan adopted from the caprice of the author, but with not the least reference to the learner. Consequently, the whole subject was almost totally neglected ;—so much depends upon the manner, in which knowledge is presented to the learner. But within a few years great improvements have been made in the elementary books upon this subject, which have brought it into notice. It is now very generally, though I am far from believing very successfully, taught in our schools. The manner of teaching it by question and answer, which is the manner adopted by the books most approved at present, is objectionable, although it enables the young learner *to seem* to have acquired great knowledge of the subject. The questions direct the learner to the most important facts, no doubt ; but that is of little consequence to him, so long as he is unprepared to comprehend them. He connects the question and its answer by some artificial association, and will repeat a passage containing important information, with verbal accuracy. To the hearers, who have already acquired a knowledge of the subject, and who attach to the words a definite and correct meaning, the child seems to have an astonishing fund of knowledge. But

I apprehend, that many a child, who thus delights and astonishes his parents, and gains his books and instructor great renown, would make as sorry a figure, on more careful examination, as the child mentioned by Miss Hamilton. After answering to all his questions, and giving an accurate account of the statistics of Turkey, on being asked, 'Where is Turkey?'—a question not in the book—he replied, '*In the yard with the poults.*'

But, notwithstanding the strong objections to printed questions in our elementary books, when the alternative comes to be between questions well shaped by the author, and the marking-off and committing-to-memory system, which was formerly and is yet sometimes practised, there can be no doubt that the former is the lesser of the evils. If the instructor understand both the subject and his pupil's mind well enough to ask *judicious* questions, I should much prefer that printed questions were wholly omitted. They are an evil, and were better avoided, unless, by adopting them, we avoid a still greater evil.

The improvements in our school-books upon this subject, have consisted in greater attention and accuracy in the collection of authentic and important facts, and in a more consistent arrangement of them. But by far the most important improvement, made in the last twenty years in teaching geography,—and it has hardly been taught at all longer than that in our common schools,—is the introduction of maps. The principle of using maps deserves unqualified approbation. For when the object and meaning of a map are thoroughly understood by the pupil, it aids him to confine his attention, and form a conception of the relative magnitude of towns, countries, states, and continents, and also of the relative length and breadth of rivers, and the situation of places with regard to each other, much better than the most elaborate and minute descriptions, without such aid. But the plan, and especially the principle of arrangement, upon which almost all the most popular books upon this subject have been made, I must beg leave to object

to strongly, and decidedly. And while I hold my own opinions upon this subject, and claim the right to state, to explain and to vindicate them; if others hold different opinions, they have the same rights. Our difference of opinion in this age, of free inquiry is not surprising, and implies no mutual disrespect.

The pupil, by some of the most approved systems, is presented in the onset with a map of the whole world, reduced to the size of a hat-crown. In connexion with this, he is directed to read a description of the largest rivers, mountains and seas; and also to learn some accounts of the character and manners of the principal nations. Perhaps he will now be required to learn the amount of exports and imports of the most commercial nations, to the accuracy of a farthing.

Some, not content with presenting the whole earth to the first and single glance of the young learner, and as if determined to push the absurdity of the plan to the utmost, have given the whole solar system to the child, for his first lesson in geography. This is called setting up landmarks, and getting a general knowledge of the subject; but so far from that, in my view, it is getting no knowledge at all. It is only a confusion of words, without any definite meaning attached to them whatever.

The subject is begun precisely at the wrong end. If it is addressed to the understanding of the young learner, this arrangement seems to presume that he will take a deeper interest in, and better comprehend the general features of the world, embracing the largest mountains and rivers, and the characters of nations, of whose existence he has perhaps never before heard, than the roads, hills, and rivers of his own neighbourhood, and the boundaries of his own town, county, or State. Besides, upon the strictest philosophical principles, it is perfectly demonstrable that he can get no adequate idea of the magnitude of the largest mountains and rivers of the world, except by comparing them with the mountains and rivers which he has seen, and of which he has formed some definite idea. 'A

river three times as wide as our river !"—this is the natural language of children, and it is philosophical language. In forming a conception of a distant mountain or river, which we have never seen, we proceed precisely as we do in forming a conception of any other magnitude. We fix upon something of the same kind, which is known as a unit of measure ; and then compare, and discover the relation of what is known with what is unknown. So the child could form some idea of a mountain twice as high as the hill before his eyes ; or he could form a tolerable conception of a river three times as broad as the brook, which runs before his father's door, or the river he may, perhaps, have seen in a neighbouring town ; but talk to him at once of a mountain many thousand feet high, and a river a hundred miles wide, and I am much mistaken if he forms the least conception of what he is told.

When God created Adam, we are told that he placed him in the Garden of Eden. What do you suppose Adam wished to know first after he opened his eyes on the fair face of the earth, over whose inhabitants he was newly appointed lord ? And what course do you suppose he took to become acquainted with his dominions and his duties ? Did he stand in conscious dignity, and carefully survey the objects around him on that part of the earth's surface on which he found himself ; or, did he sit down and sigh for a book treating of America or the moon ? If he had a particle of unperverted reason, he first surveyed the Garden of Eden, and that from the point on which he stood. He soon became acquainted with every part of it. He knew every tree. He examined every hillock and every precipice. He found every spring, and followed the course of every rivulet within his little territory. Then and not till then would he naturally begin to look abroad beyond his immediate enclosures, and see whether the streams, which fertilized the Garden of Eden, were common to other places. Then and not till then would he naturally begin to inquire whence they came, and whither they went.

The correct plan for an elementary work on geography,

would, therefore, enable the learner to begin at home, with a description, and if practicable with a map, of the town in which he lives. Or if that should be thought too particular, the instructor must supply the description, and the map begin with the pupil's own county or State, in which he will of course be most interested. From this he may proceed to the whole country or kingdom, and thence to the more general divisions of the earth. The maps will of course be reduced in their scale, and the descriptions grow less and less minute, as the places are further removed, or from any cause become less interesting. This presents the geography of the earth in perspective. And it should be so. We need to know most, other things being equal, concerning those places, which are nearest to us.

Having traced the progress of geography to its present condition in our schools, and having stated my views of the best arrangement of elementary geographical works as perspicuously as I am able in the brief space I can assign to this part of my lecture, I proceed to explain how I should recommend that the subject be taught. Each pupil* should be provided with a small, light, black board, say eighteen inches long by fifteen broad. If this cannot easily be procured, a common slate and pencil will very well answer the purpose. Each pupil should also have a map of the country lying immediately around him, on a distinct and large scale; for here he is to begin his study. After explaining the points of compass, let his attention be directed to the map; explain to him by some famil-

* Children of common capacity, of five or six years of age, may with advantage begin the study of geography upon the plan here recommended, provided they can be supplied by their teacher or otherwise with a description of the country immediately around them, in such simple language as they can understand, and with a full map of the same region on a large and distinct scale. The acquisition of useful knowledge, even by children of this tender age, will be very considerable, and the habits of mind formed will be found to be of incalculable utility in pursuit of all other subjects of education, to which their attention may be simultaneously or subsequently directed.

lar illustration the meaning of a map, and inform him that the top is north, the bottom south, the right hand east, and the left hand west. Let him find on the map the town or the village, where he resides, and observe carefully its shape, its ponds, its rivers, and its hills or mountains. All these he is to draw from the map upon his slate or small black board; and to draw them over and over again upon a variety of scales, till he can do it accurately from his memory and conceptions, without the aid of his map. Next, direct the pupil to observe on the map the boundaries of his town; and to observe them so carefully as to be able to name the places which lie around his own drawing, when his map is withdrawn from him. He may now lay down his map and small black board, and see what he can find in his elementary book, or in any book, concerning the place he has been drawing. To show the pupil that this is a matter for investigation, and that it is one for which he is fully competent, his teacher should encourage him to consider whether he knows anything about this town, whose shape and features he has been drawing. Whether there are any small streams, mills, factories, or public institutions in it, which he cannot find in any description. He will probably be able to draw the road, which passes by his own schoolhouse, and to place a mark at least for the position of the schoolhouse. If he can do this, he will be greatly gratified with his acquirements and success. And well he may be; for he understands much more of the use of a map and the meaning of the term geography, than if he had merely learned to say that 'geography is a description of the earth.' If the teacher can add anything to the pupil's knowledge of the place, relate any event or anecdote of history, which happened there; or if he can refer the pupil to any correct sources of information upon the subject, he will not only add variety to the exercise, and thus fix the attention, but will inculcate the very important habit of investigation. And this habit may be formed while children are yet very young.

This is learning the lesson. And when one or two lessons

have been learned in this way, the teacher will have very little more trouble with this part of the business, whatever may be the number of his pupils. The lesson being thus learned, all books and small black boards may now be laid aside, and the pupil is ready to recite.

For recitations a large black board should be used, at least three feet wide and three and a half feet long. This, if possible, should be so placed in the school-room, that the pupil standing before it, may have his face to the north; when of course his right hand will be to the east, his back to the south, and his left hand to the west. If the class consist of several, and be now assembled for recitation, let them stand round, fronting the black board, in such a manner that each, as well as the teacher, may see every line that may be drawn. Direct one pupil to draw the north line of the town or portion of the earth's surface, which he has been learning, on as large a scale as the board will admit. As soon as he has done it, let him step back to his place, and let it be distinctly understood that it is the privilege and the duty of every pupil in the class to criticise the work. They have all a direct interest in seeing that it is done correctly; because, if it be incorrect, it will affect every line they attempt to join to it, and thus prevent them from being accurate themselves. Besides, they have another motive to steady attention to the business, perhaps as strong as that of interest. Such is the perversity of human nature, we are very willing to see each other's faults. If no one has any amendment to offer, and the teacher is satisfied with the work, he may call upon another to draw the east line, and subject the work to the same critical examination. There is a new difficulty comes into the work in drawing this line, because it must be drawn in exact proportion to the first boundary. The pupil must not only have an accurate conception of each line, and each part of a line, in his mind, but he must judge of their proportions to each other; and so must the whole class when they come to criticise. Observe now the various and distinct powers of the mind, that have been called into exercise thus

far only in the process of reciting. There is sensation, perception, conception, discrimination, and judgment; and all of them under their strict marshal, attention.

Having completed the outline of the lesson in this manner, let a pupil be called upon to name the towns on its borders, marking the place of each as he names them, mentioning its direction from the town drawn, and pointing to its actual position with reference to the place in which he stands. Then let the hills, mountains, streams and ponds be laid down upon the drawing, and require the pupil to point with his hand to their true position from him. Having thus recited what has been learned from the map without its aid, and from the mind alone, you may be sure your lesson is understood. There can be no mistake. And if the lesson cannot be so recited, you cannot be sure that your pupil understands what he has been about. For we have not distinctly conceived the situations of places, till we can form our conceptions alone, and represent those places in a drawing.

With the black board and their drawing still before the class, questions should now be asked to elicit all the historical, botanical, geological or any topographical information, which may have been obtained in the course of the investigations to which I have before alluded.

It will be perceived that in reciting a lesson in geography, I call for historical information, and I improve the opportunity to remark, that I think children should always learn the particulars or facts of history in connexion with geography. And this is as far as children can go in history. The particulars, the facts or events are naturally and strongly associated with the places where they happened. You cannot separate them, if the child perfectly understands them both. You must let them go into his mind together. For example; if a child have a distinct conception of the shape and situation of Bunker-hill, and have also in his memory an account of the interesting and important event, which happened there, they will always suggest each other. The association is the natu-

ral one, and therefore it is the best one, which can be found for a child. The infant mind cannot associate the events of history by cause and effect, which is always the principle of association in philosophical history. Therefore, general and philosophical history is not adapted to the youthful mind. Children can understand detached events, and they will always be most interested in them, and consequently be most likely to understand them perfectly, in connexion with the places where those events happened. At a subsequent and a late period in their mental developement, they can associate these particulars together by the principle of cause and effect. Then, and not till then, can they study to advantage a philosophical and general history. All history before that is to them chronology.

Having thus completed the pupil's own town, the next exercise may be one or more of the adjoining towns, according to their difficulty. At reciting this second lesson, the shape of the town or towns may be drawn upon a variety of scales. This exercise will be found to be exceedingly useful, as a severe discipline of the mind is involved in producing accurate proportions. And the whole class should be kept constantly on the alert, in judging of the truth of the proportions between the several lines drawn by each one of them. When greater ease has been acquired in drawing, and several towns can be despatched at a lesson, there will be a wider field for this exercise in adjusting the relative size and shape of different towns. Let the class thus pass through their own county, taking for each lesson a group of contiguous towns; and there should be a review of their work as often as once for every four or five lessons.*

I will not detain you longer upon the details of teaching geography, than barely to observe, that besides my more gen-

* If this process should be thought too minute, the pupil has only to begin drawing by counties, and proceed to the completion of his own State, in the same manner as he would by the above process complete his own county.

eral remarks just made, I have gone through above, very minutely, the process of learning and reciting one lesson. *Ex uno discite omnes.* You will, perhaps, inquire, if it takes so long to describe the process, and a still longer time for the pupil to perform it, where we shall find time for the study of geography, upon this plan. A whole life would be consumed in the process. So, indeed, it would, if we were to go over the whole earth's surface with the same minuteness, with which we learn our own town. But this is neither necessary nor desirable. The whole empire of China would, perhaps, be despatched by pupils here in less time than would be necessary to draw a county. So that on the whole we shall not lose much time. On the contrary, in one respect at least we shall gain time; for we shall find appropriate employment for children, who now waste, worse than waste, their years upon studies not suited to their capacities.

While I do not concede that a minute and accurate knowledge of geography yields to that of any other science in practical utility as an acquisition; and while I do not concede that this particular mode of teaching it, is less likely to leave permanent valuable knowledge in the mind of the pupil than any other, but, on the contrary, contend that it will enable him to retain his acquisitions much better than the common methods, or any method with which I am acquainted; still it is not upon either or both of these considerations, that I mainly found the claims of geography to attention, as an elementary study for young children. It affords, when studied in the manner I have described, the best of discipline for several of the powers earliest developed in the infant mind. And, *therefore*, they should be employed upon it. I do not know that I should go too far, if I should say, that,—if the vast amount of geographical knowledge they will acquire, were entirely useless in itself, and if every fact, description and interesting event learned, were utterly obliterated from the mind, the moment they close their book,—I would nevertheless put them upon the study for the discipline it affords the mind alone. I know of no one elementary study

within the range of subjects adapted to the capacities of children, which calls into exercise so many of their faculties, and trains them in such an agreeable manner, as geography, when it is properly studied. The sense of seeing and the perceptive powers in examining the shapes of geographical delineations,—the power of conception, in forming in the mind the image of objects, when the objects themselves are withdrawn,—the powers of discrimination, comparison and judgment in adjusting the relative proportions of lines,—memory in relating the facts and events of local history,—are among those early faculties which are most exercised and disciplined by this elementary study. And last and greatest of all is the advantage of it in forming the invaluable habits of investigation, accurate observation, and attention. Being partly employed upon ideas derived immediately from the senses, and partly upon those of memory and reflection, it forms, in a course of early discipline, a convenient link between the playthings of the nursery and the abstractions of the school-room.

I have now said all that I intended to say upon geography, and the best mode of teaching it. A word to my brethren of the profession, and I have done. We are about to leave here upon record our names and ‘a pledge of our zealous efforts to promote the cause of popular education.’ May that pledge be redeemed in spirit and in truth. It is a great cause; none can be greater. Our progress must, indeed, be slow, with all our efforts; but then, with them, it may be sure. Bacon, our great benefactor, has thrown forward an anchor for us, with which the world has not yet come up. And if you will consent to seize hold and pull, you will produce a much more sensible motion, than to be hoisting your sails and flourishing your pennants in a dead calm. Science now sits solemnly in her temple afar off. The ways of approach are dark and devious. A few votaries, only, by chance or untired perseverance, gain access, till, at the expense of half their lives, they are warned by experience, like an inspiration from Above, to become as little children, that they may enter. But when the

influence of education is more duly estimated ; and when the cultivation of the head and heart shall be united, and, indeed, form one distinct and dignified profession, drawing to its practice the greatest and the best of men ; then we may hope that a proper direction will be given to the opening minds and expanding hearts of the young, and that all the deep and permanent prepossessions of childhood and youth, will be upon the side of truth and virtue. Science, philosophy and religion will then be blended with their very natures, to grow with their growth, and strengthen with their strength.

In this great work we can all participate. But what *we* do must be done quickly. We are passing rapidly on upon the great high road of life. Other generations are coming forward in crowds to take our places ; and soon, very soon, instead of the fathers shall be the children. We ought to meet them, to meet them in their cradles, and extend to them, to every one of them, the blessings of a good education.

I call upon you, whose dominion is in the domestic circle, you, who send your influences unseen into the rugged recesses of sterner hearts, to lend us your aid. You, who hold in your arms and lead by the hand the hope of the present and the strength of the coming generation, lend us your aid. You, who minister at the altars of religion, warn us of our sins, and reassure our feeble virtues, lend us your aid. You, who are appointed to rule in the land, and to whom is committed the ark of our free institutions, lend us your aid.

MR RUSSELL'S LECTURE.

THIS BUREAU HAS

LECTURE III.

THE
INFANT SCHOOL SYSTEM OF EDUCATION,
AND THE EXTENT
TO WHICH IT MAY BE ADVANTAGEOUSLY APPLIED
TO ALL
PRIMARY SCHOOLS.

BY WILLIAM RUSSELL.

THE establishment of schools adapted to the condition and capacities of infancy, is an important event, whether regarded as the commencement of a new era in the exertions of philanthropy and charity, or the source of extensive improvement in elementary education. These schools are the field of a most interesting experiment in morals. The question is here to be answered, whether much of human evil may be avoided or averted, rather than remedied; whether, in the treatment of the mind, as well as of the body, a preventive may be substituted for a curative regimen. The momentous results connected with this new order of things, are developing in gradual but sure and encouraging succession. The physical frame of man is beginning to receive a portion of that care which is due to it, as a production of creative wisdom; the human heart begins to be regarded as the native soil of virtue, which early culture is to keep free from encroaching weeds; and the intellect begins to be treated as a self-impelling power, which education is to aid, rather than to check.

The general effect of methods founded on such views of education can, as yet, be imagined only. But even the slight progress already made, affords a wide scope to just expectation. The rational education of infancy seems destined to effect vast, though silent and unostentatious, changes on the condition of man. His physical strength and activity, his intellectual and moral tendencies, may, by this means, be brought under the influence of such modes and habits of action as shall renovate his whole character ; substituting intelligent, spontaneous, and habitual virtue, with its attendant happiness, for the struggle of self-conquest, or the pain of conscious failure,—the two extremes between which the human heart has hitherto vibrated, under the influence of arbitrary education. No doubt, at least, remains, that the most successful as well as the most natural method of removing many of the evils of social life, is, to impart active habits, and an elevated character, to the minds of the poor, and to do this effectually and extensively, by means of universal early education.

As little doubt seems to remain, that the modes of elementary instruction, prevailing previous to the introduction of infant schools, were, in general, defective and inadequate ; that, under their influence, the health of the body, and the natural action of the mind, were neglected ; the affections left uncultivated or ill-regulated ; the intellect forced into arbitrary channels, and accustomed to mechanical influences and morbid habits.

It is unnecessary to enter at present into a particular statement of the common defects of elementary education, previous to the introduction of the methods adopted in infant schools. They may be briefly summed up in the great neglect of physical accommodation, of comfort, and of health ; in the small size, defective ventilation, inconvenient arrangement, and gloomy aspect of most school-rooms ; their uncomfortable seats ; the long continued and painful sedentary attitude of the little pupils ; the entire absence of appropriate visible objects, addressed to the active feelings and restless imagination of childhood ; the want of cheering and invigorating exercise ;

a mechanical routine of application, producing little effect but on the memory, and leaving the understanding and the imagination nearly inactive; lessons presented, in general, in the form of compulsory tasks; modes of discipline retrospective rather than anticipative, repulsive, therefore, and arbitrary, not founded on reason and affection, and influencing the imagination only through the medium of fear or restraint; no social intercourse between the pupils permitted; and consequently the natural opportunities for influencing feeling and character precluded.

A well-regulated infant school furnishes a happy contrast to these defects: it exhibits a spacious, airy, cheerful, and comfortable apartment, prepared expressly for every good influence on the infant being; a frequent change of attitude and of employment; the presence of pictures and other objects calculated to inspire the mind with activity and delight, or to diffuse tranquillity and tenderness of feeling; mental employments interspersed with appropriate juvenile exercise, or judicious intervals of entire rest; lessons adapted to the capacities and desires of infancy; mental exertion rendered agreeable and voluntary; discipline consisting chiefly of rational and affectionate measures addressed to sympathy and moral feeling, and, as far as practicable, to reason, and turning upon the incidents arising from the pupils' intercourse with each other. Such are the prominent features of the system adopted in infant schools, and which, as might reasonably have been anticipated, at a time of unusual thought and inquiry on the subject of education, have commended themselves to the minds of all who have had opportunity to observe them,—which have already, to some extent, been introduced in primary and other elementary schools, and which have become a subject of peculiar interest to all who are, in any way, concerned in early education.

Before attempting to speak more particularly of the extent to which these improvements in instruction may be introduced in primary schools in this country, it will be necessary to advert

to the circumstances in which the infant schools originated, and under which they still exist, in England. There, they were introduced as a charity, designed for the benefit of the poor. Experience soon suggested, in some instances, the advantage of allowing them, in part, at least, to depend on a slight contribution from the parents of the children who are taught in them. But they continue, in general, like some of those established in cities in this country, to present themselves as institutions of benevolence, patronized by the bounty of the richer classes of society, rather than supported by the voluntary exertions of the poor themselves, or by the choice of parents in better circumstances, who prefer them to other schools, or to the common course of domestic education.

Another circumstance deserving consideration towards a proper estimation of infant schools, and the methods of instruction adopted in them, is the fact, that these schools were originally established for the benefit of a class of society among whom the advantages of any form of education had scarcely been felt,—for parents whose circumstances were, in general, such, that they felt it necessary to have their children put, as early as possible, into the way of earning something towards the support of their families. People in such a condition naturally regard even the slightest acquisition in education, as a new and unexpected benefit, and are not generally solicitous about the attainments made by their children at an elementary school, as introductory to education at schools of a higher order. But even in those cases in which infant schools are expressly intended as a preparatory step to the national schools of England, (corresponding in some respects to the primary and common schools of New England,) the initiation required at the infant schools is limited by the narrowness of education at these higher schools themselves; in few or none of which the branches of instruction, or the extent to which they are carried, are equal to those of the New England common schools, when conducted by a teacher of enterprise and intelligence.

The attempt, therefore, to transfer the infant school system as it is called, to the first stages of instruction in this country, would seem to require a consideration of the difference of the state of education here, and in England. The children of every parent in New England, may, by the auspicious arrangement of the system of public schools, receive the benefit of instruction, as soon as they are old enough to walk to the school-house. What is here needed, then, in the way of improvement, is not the introduction of a new system, but the better adaptation of that which already exists, to the education of the youngest classes of scholars. All the advantages of the methods of instruction in infant schools, would be attained by adopting the *spirit* of these methods, in *primary education*. Every village school in New England, may, during the summer, if not the winter months, become an infant school, as far as such a change is desirable.

That the result, in this case, would be highly advantageous, is a point which needs no proof to those who have ever visited an infant school, and observed the intelligence, the cheerfulness, and the infantine innocence and goodness which they cherish, even when taught in a very imperfect and mechanical way.

The extent to which the infant school system may be applied to all primary schools, should be measured, not by the extent to which its routine may be borrowed or copied. The mechanism of the infant school system is, indeed, excellent in many respects. Its whole aspect is happy and inspiring, and favors the expansion of the intellect and the heart, while it promotes a healthful vigor of body. But a literal copy of its minutest details, is neither practicable nor expedient. It is of the utmost consequence, in this case, to look beyond the external routine to the internal principle. If we secure the latter, we shall not lose the benefit of the former, although we may modify it by new circumstances. Excellent as is the spirit which pervades the general system of the infant schools, there

are some points in which their details of instruction admit of much improvement,—some in which they are radically defective, or, at all events, unsuitable for the purposes of early education in New England, and, perhaps, in other parts of this country.

The objectionable points now alluded to, are chiefly comprehended in the injurious habit of learning by rote. This defect in the prevailing modes of instruction at infant schools, pervades most of the lessons, from the sublime topics of religion, or the sciences of geometry and astronomy, to the tables of arithmetic. Proof of this point may be found in the unintelligible matters of religious theory, and the obvious peculiarities of faith, which form a large portion of the catechetical instruction of infant schools,—in the fact that the lessons in geometry and astronomy are but a course of recitations in nomenclature, aided by ocular or tangible illustrations, while the tables in arithmetic are made a mere mechanical succession of sounds, dependent on an arbitrary effort of memory. By such methods of instruction children may be made to appear intelligent in subjects naturally far beyond their grasp; but the result is mere outward show. The intellect is still dormant; it must be waked, if at all, by very different expedients.

Leaving these points, which concern the understanding and the heart, we shall find, if we proceed to the departments of imagination and taste, a want, not only of felicity, but of truth and correctness, in the expedients adopted for the cultivation of this part of the intellectual constitution. Poetry, music, and pictures, might exert a fine influence on the unfolding mind of infancy, were they appropriately employed. But used as, in general, they now are, their effect is rather to degrade and pervert, than to elevate the associations of the infant mind.

The hymns prescribed as infant school exercises, are, with a few exceptions, a succession of verses which possess none of the attributes of poetry, and often fall into absolute doggerel. It is exceedingly difficult, no doubt, to find good poetry for children and infancy; but this is no reason for using that which is bad;—better that imagination should remain uncultivated, than become degraded or perverted.

The music at infant schools is seldom what it should be,—perfectly simple and perfectly correct. The ear of infancy should be attuned to the purest and best forms of music, or should be left uninfluenced. The high polish of consummate skill in this branch of art, is not necessary, it is true, in leading the voices of infants. But an early fault of taste and habit, caught from bad example, is a misfortune for life ; since it entails corruption on all the mental associations connected with music.*

Of the drawings or engravings in common use at infant schools it is impossible to speak with truth, unless in terms of strong reprehension. The subjects are very often badly chosen, presenting to the eye of infancy the exhibition, sometimes, of the most degrading and horrid crimes, instead of such objects as should shed a serene and happy influence on the heart. Pictures delineating scenes in which infants cannot naturally take any interest, or which they cannot comprehend, are also in very common use. But an objection more general exists in the gross inaccuracy of the forms, and the inappropriate colors, in most pictures prepared for children. Here is an injury not barely to taste, but actually to the power of perception,—to truth and accuracy in the habits of the mind. Much improvement, it is true, has taken place, within a few years, in this branch of art. But children's picture books still abound in the most striking errors of delineation, and tend generally to hold back or mislead the mental powers, rather than to incite or assist them.

The distinguishing points of excellence in the infant school system, are found in the general plan of education on which

* Specimens of what music adapted to children should be, were given by a class of children, during the lecture of Mr Woodbridge. No person who had the happiness of hearing those simple and touching strains, can doubt in regard to the great influence of music on the juvenile mind, and the possibility of its being early and scientifically taught, or forbear to wish that such exercises may be speedily and extensively introduced in all schools for young children.

it is based, rather than its execution in detail: they consist, chiefly, in the blending of physical and moral culture with the exercise of intellect, and the embodying of all in simple and attractive forms, addressed to the imagination. The infant school system is, in these respects, an immense improvement in modes of education, which every friend to the best interests of man must wish to see transferred to all elementary schools.

To appreciate rightly the improvement effected by the introduction of this system, we must contrast its operations with those of the common modes of elementary instruction. Looking into an infant school, we observe the children employed in healthful and pleasant recreation, or enjoying a temporary repose; listening to a story inculcating the virtues of childhood; admiring a picture, or joining in a song; yielding a cheerful obedience to affectionate management; asking the artless questions which are prompted by the natural curiosity of infancy, or listening, with deep interest and attention, to their instructor's answers.

Let us turn to inspect, for a moment, a primary school, taught in the common way,—and we see usually a number of little sufferers, confined to one uncomfortable posture, for hours in succession; enduring an irksome restraint, as the condition of an escape from penalties; conning mechanically a memory lesson which they do not understand, or reciting it as mechanically; controlled in every look and action by the aspect of authority;—the whole nature of the little beings put under a discipline of repression and restraint.

To supersede this repulsive system by the other, would certainly be a most desirable step in the progress of human improvement. This result, however, is not to be attained by merely exchanging one routine for another, but by entering into the spirit of rational, affectionate, and congenial methods of early culture.

To secure the benefits of the improved system, teachers and others who can exert an influence on primary education,

should not look merely to a change of books or the introduction of apparatus, but to a general reformation of methods of education. Attention should, in the first place, be given to *the influence of health, activity, and happiness, on the development of the infant powers.*

The situation, the size, and the arrangement of the school-house, should be the first objects on which to commence improvement. These should be divested of every hinderance to health, and, by every possible means, rendered conducive to happiness. The school-room, without and within, should favor cheerfulness and freedom, and be propitious to intellectual association.

Teachers cannot perhaps succeed in changing the situation of school-houses, so as to have them placed in spots, adapted, by retirement, shade or shelter, to a good influence, moral and intellectual, as well as physical. But they might sometimes succeed in obtaining, for the use of their little charge, permission to cultivate an adjoining piece of ground, as a happy opportunity for inculcating a practical lesson on the fruits of industry, and of leading the young mind to watch the growth and trace the forms of plants, or to observe the frame and habits of insects. Imagination and taste might here be brought under the best of influences.

But circumstances may render it impossible to attain the aid of such advantages in education. The teacher should therefore devote an assiduous attention to *the internal arrangement of the school-room*; the adaptation of its furniture to convenience and comfort; the decoration of the walls with objects calculated to exert a useful and happy influence on the mind,—especially, in the proper season, with shrubs and flowers, and other productions of nature, which necessarily excel pictures, and all forms of imitation, as the original does the copy. Pictures, however, if well executed and well chosen, are among the best means of awakening and interesting the mind of infancy; and a few books of engravings, prepared for the use of infant and primary schools, with or even without, the

addition of appropriate letter-press, would be a very interesting and useful source of thought and conversation between teachers and children. A book of this description may be made by every teacher for his own use, by procuring a number of good cuts or drawings, and forming them into a volume, by inserting them between the leaves of a blank book of suitable size,—cutting out every other blank leaf, and pasting the picture on the next. This expedient has been found very serviceable for interesting and employing children too young to be able to read.

A *play-ground*, enclosed sufficiently for the safety of very young children, and provided to some extent with playthings of such a kind, and of such size and form, as would conduce to healthful exercise, and furnish agreeable and perhaps instructive employment, would be a valuable aid to early education. Health, cheerfulness, and tranquillity, are not merely important things in themselves, as means of immediate happiness—they are indispensable in infancy and childhood to the natural moral action of the feelings, and the successful development of intellect. Moral energy and self-control may well supersede such aids with the adult. But the dependent condition of infancy cannot dispense with them. They are, in fact, its birthright; in a natural form of life, it is surrounded with them in abundance; and, in depriving it of these, we thwart the nature of the infant being more seriously, perhaps, than we should by withholding food and rest, or by perverting the forms in which these means of life are administered.

It should never be forgotten, that, in the education of infancy, and especially as conducted in cities, a great violence is generally done to the constitution and character of man. We take the being who is born to inherit the free air and the spacious earth, with all their wide variety of forms and colors, of motion, change, and life,—a theatre of grandeur, and beauty, and delight; we take this being, and shut him up from the healthful and fragrant atmosphere, and the inspiring light; we cut off his communication with the varied face of the earth,

with the great worlds of vegetable and animal life, and all the pure and natural pleasures of his own sensations, with the varying but ever happy thoughts to which these give rise; and we confine him to a small and perhaps disagreeable room, place him on an uncomfortable bench, put a book in his hand, and compel him to look on it, and, as far as we can, chain his mind to its mechanical influence.

To the careless eye of him who is content with the present condition and past attainments of man, and whose indolence or timidity of nature would lead him to submit to all the load of imperfection which he has himself inherited, or whose own inactivity of mind leads him to regard with a skeptic eye every attempt to render education the means of a general improvement of the intellectual and moral condition of society,—to such a mind the accumulation of evils under which infancy and childhood have been left to labor, may seem a picture of fancy. But to the eye of the mother and the teacher, whose office it is to watch the progress, and observe the impediments of the young mind, these hinderances appear in their true light. It is to these close observers only, that truth, in this form of it, can appear. And the infant school system is based on the observation and experience of mothers and elementary teachers, when it prescribes, for infant education, the use of a large, airy, cheerful room, and enjoins a frequent change of attitude, with occasional alternations of active play and of rest, or even of sleep.

The modes of city life leave very little in the power of the teacher, in regard to the happy influence of nature on the young mind. But the obligation of teachers is, in such circumstances, only rendered stronger, to use every exertion which may counteract the evils of confinement and discomfort, and to take all possible measures for cherishing in the mind those propitious states of feeling, which education so limited and embarrassed is apt to repress. A school-room in a city or a large town, may be necessarily excluded from a free access of air and light. The attentive teacher will, on this account,

double his efforts to have the internal arrangement and appearance of the room made convenient and comfortable; he will endeavour to have the children seated at as great a distance as possible from each other, and their seats contrived with express regard to free and varied postures of body; he will reserve, if possible, a clear space sufficiently large for simultaneous exercise in walking, running, and the other forms of motion natural to early childhood, and conducive to mental activity and enjoyment; he will be strictly watchful of ventilation, both in summer and in winter, so as to preserve a moderate and healthful atmosphere, in an apartment in which so large a part of every day is spent by young children; he will gratify and cheer the mind, through the medium of the eye, by agreeable and instructive pictures and other objects, suspended on the walls, since every aid to cheerfulness is a favorable impulse to the habits of mind and of body.

Primary schools in the country are exempted from the unfavorable influences of restricted space and unwholesome atmosphere. But care should be taken, in such circumstances, to keep pace, in interior arrangements, with the happy influences existing without. There is danger of the child feeling that all his pleasures lie out of the school-room, and that here alone he is to be confined and restrained, or surrounded by dulness and monotony. Teachers in the country should make liberal use of the advantages which they enjoy, for attracting the attention and impressing the imagination of childhood, by the productions of nature. These only can fully impart that silent instruction, and that innocent delight, which, although they cannot be measured by definite and tangible marks, form the most natural and the most effectual development of mind, whether we regard its intellectual or its moral habits.

Teachers of primary schools ought, in a word, to attend to, and, as far as possible, regulate, everything that may influence early habit;—remembering that their peculiar duties render them, next to mothers, responsible for the welfare of man;

and that if there is any object for which no sacrifice of time and of exertion is too great, it is the early direction of the affections, the intellect, and the health of human beings. Teachers who are disposed to take these matters on trust, and quietly to follow in the track of custom, are unfit for the office they have assumed, and would do well to relinquish it, in favor of an employment less responsible in its nature.

The school-house or room having received its due share of attention, as a tacit but powerful influence on the mind and corporeal frame of infancy, the next step, in the order of importance, is to reform *the moral management* of the school, —to adopt a preventive, instead of a retrospective care of the mind; to act upon the individual by means of general sympathy; to break loose from the plan of observing and repressing single faults, for the moment, and to adopt a liberal and generous management, which appeals to affection and conscience, identifying itself with imagination and with character; moulding the disposition by the genial and voluntary influence of individual intellect; avoiding in every word, and tone, and look, a single expression which may indicate the presupposing of evil intention, in infantine ‘faults’, as they are called, but, on the contrary, rendering the teacher’s measures an appeal to the heart, and a model to the imagination; and throwing, by every means, a cheerful aspect on whatever comes under the name of duty. In all these respects, the infant school system forms a striking contrast to the literal and mechanical modes of discipline, prevailing in elementary schools taught in the ordinary way.

The great moral defect in primary schools, is, that in them the management of childhood is regulated by a few arbitrary rules, and a corresponding scheme of various stages of punishment. By this narrow method, the child whose constitution inclines him to stillness of body, and negative action of mind is invested with a false merit; while the active, the buoyant, and the enterprising, carry with them, into the school-room,

a load of native guilt, which soon brings down upon its possessors the punishment which they are told it deserves.

A discipline characterised chiefly by a series of restraints, represses the action of the mind, takes away its freedom, and the whole merit and conscious pleasure of voluntary virtue. A discipline consisting principally of infliction, presents to the young mind the mean animal motive of present pain, and brings forth all the lower attributes of character,—fear, duplicity, and cunning.

The distinguishing excellence of the infant school method, is, that it addresses itself to the heart, and presents to the child the same class of motives that are employed by maternal love: it cheers and leads onward the young mind, presupposing that infant morality will always be correct, if not turned from its natural course. To create a pure and healthful conscience, which may serve as a sure guide and protecting guardian in later years, is one great aim of this happy mode of management. The teacher, therefore, does not rest satisfied with prescribing rules and penalties, but endeavours to enter into the inmost feelings of the infant being, and preserve them in their original freshness and force.

The common system of general rules and prohibitions, is faulty as a means of early culture; since it ever must fail of touching the springs of individual character. By its generality alone, not to speak of other defects, it merges the individual in the mass, and takes away much of personal responsibility and individual character, which are the only sure foundation of virtue. Its utmost limit of success is a negative compliance with a principle of convenience; and its prohibitory character, tending to repress inquiry and activity, renders it, for the most part, utterly ineffectual as a means of improvement to the mind.

The method of the infant schools appeals, on the contrary, to thought and feeling in the individual breast; it implants and cherishes those principles of rational and affectionate obedience; it cultivates those feelings of cheerfulness or of tranquil-

lity, from the absence of which rules and penalties become necessary : it is thus enabled to dispense with these formal and mechanical aids, and, rising to a higher class of mental motives, exerts a more propitious influence. It fastens on the individual mind by methods resembling those of judicious maternal management, which are always addressed to the affections or to reason, and operate not as laws but as principles.

An infant school, when rightly conducted, is made to resemble a family ; the teacher taking, for a time, the place of the parent. In a word, the mind and character of the teacher are brought into direct contact with those of the children ; and the management of the school depends not on a preestablished system of rules or routine of exercises, but on the immediate action of a presiding mind. No dependence is placed on formalities of any sort. The teacher endeavours rather to avoid these, and trusts to his influence over reason and affection. Instead of repressing the mind by a rule, or restraining it by a penalty, he endeavours to lift it up to intelligent views of order and duty, and to inspire it with the conscious pleasure of rectitude and self-control. To this end, he reasons and persuades ; he appeals to sympathy ; he calls in the aid of imagination. If the quickness of infantile emotion has, for a moment, overthrown reason, he calmly and gently endeavours to raise it again. If waywardness arises, the little offender is never made to feel the discipline of systematic resentment : he is directed to a new train of thought, by means of new objects ; he is placed amidst a cheerful group of his associates, and is allowed to take part in their employments ; he is presented with a picture calculated to raise an agreeable or tranquil state of feeling ; or is told an appropriate and interesting story, which wins him back from his temporary mood of pain, and restores to him that balance of his infant powers, which circumstances had disturbed.

The teacher of an infant school does not come to his employment with an apparatus of regulations, prohibitions, and penalties, contrived beforehand, and happily calculated to ope-

rate as a general prescription and infallible remedy for all moral disorders: he comes to watch the infant mind in its action and tendencies, to aid and befriend it; he occasionally ventures to guide and direct it, but never thwarts it, and seldom checks it. His methods spring up at the moment; they arise out of particular occurrences, and vary with every aspect of the mind. He cherishes infantile virtue by giving it free scope and generous encouragement, rather than by soliciting or exciting it by any particular expedient: vice he anticipates and prevents, by taking away the occasions of it.*

The intellectual instruction attempted in infant schools, is not so successful, perhaps, as the moral management. It is sometimes carried much farther than the infant capacities admit, and so becomes nominal and apparent, in some particulars, more than real or beneficial. I allude, here, to the inculcation of dogmatic theology, to lessons in the nomenclature of geometry and astronomy, and to the exercise of chanting tables in arithmetic. Much, I admit, is apparently done in this way: the memory is called into use, and the children are made to seem very intelligent. But the memory thus cultivated is verbal merely; and the knowledge is that of words rather than things. This is but the exploded system of teaching by rote, revived and applied to science, instead of the columns of the spelling-book. There is no intellectual gain in such instruction; or, rather, there is no instruction given in such cases.

Leave the infant being to nature's tuition; and what a contrast is exhibited to the common, unmeaning, and mechanical process of elementary education! As soon as the infant can walk, he manifests that he has learned to discriminate forms and colors, odors and sounds, without teaching. If left to himself, he walks about in the field, picking the most beauti-

* The humorous and eccentric moralist, John Newton, has left a great legacy for teachers in that shrewd saying of his, 'Let me first fill the bushel with wheat, and then I defy any man to fill it with chaff.'

ful and fragrant plants around him. He prefers one shape of a leaf to another : he selects the most brilliant blossoms. He stops to listen to the natural melody of the birds. He watches, with sympathetic delight, the varied forms, and the free and graceful movements of the different animals he sees. In all these employments he is undergoing a discipline of attention, judgment, memory, imagination, and feeling, which the superficial observer may not trace, but which is not the less real, useful, and practical.

Appropriate instruction for infancy would be such as should follow out and regulate these tendencies of nature,—not preclude them, by an arbitrary and formal routine, as is commonly done, in what is called regular education. The infant school system is not, as yet, what it may be expected to become, after a few years more of experiment and observation shall have shed their light on this new department of instruction. It needs a still greater freedom from the shackles of previous custom. But it is deserving of all praise, in its tendency to afford a natural and generous scope to the young mind,—in its compliance with the obvious predilections of juvenile taste, in its liberal supply of those objects on which the affections of infancy and childhood naturally fasten, and by means of which they are invigorated and expanded. Pictures, and such playthings as are calculated to have a salutary effect on mind and body, are freely used in the infant schools. But it is much to be desired that the branches of knowledge, and the practical exercises, which are introduced in these and similar schools, should be such as even the infant mind could appreciate,—that *natural history*, in all those branches of it which are accessible to childhood, should be still more extensively introduced, and *taught by means of specimens or pictures, and other representations*. The capacities and propensities of the infant mind would, in this way, be equally consulted ; and a vast deal of useful mental discipline on the forms and colors of objects might thus be imparted. The elements of number and combination might be drawn from the same source. Attention

and discrimination would, by such means, be successfully cultivated ; memory would be usefully employed ; the affections would be interested and refined ; imagination would be exercised ; and the whole mind would receive an intellectual impulse, favorable to elevation and purity of character.

Instruction in this department of science, however, would need to be divested of system and of nomenclature, and to be modified, in all respects, by the condition of childhood. The teacher's aim should be to elicit thought and reflection, rather than to furnish the appearance of scientific acquirements ; early cultivation being regarded by him merely as a preparative for intellectual habits, and not requiring, therefore, the terms and the apparatus which belong to later stages in the pursuit of knowledge.

The rudiments of several useful accomplishments, may, no doubt, be successfully taught in early childhood. Among these would certainly be *reading, writing, and arithmetic* ; —but the last two as comparatively unimportant at the early stage of infancy, and the first, rather as a happy means of promoting general habits of intelligence and of pure morality, than as a thing urgent or indispensable. A child may be well informed, comparatively, may be accustomed to excellent moral habits, may have been, in fact, well taught, without being able, as yet, to write or read or spell ; and the success of a teacher who is engaged in the instruction of young children, should never be measured by the letter of attainment, even in these practical branches, but by the extent to which he has imparted the power of attention, and by his endeavours to create an inquisitive and discriminating turn of mind, or a delight in mental occupation.

The true idea of an infant or elementary school would be most fully realised by that of an infant ' lyceum,' (so to term it,) in which the main object is not to peruse any one volume, or exhaust any one science, but rather to select the instructive and the entertaining from all, to excite a general interest in

the rudiments of knowledge, and to produce a relish for intellectual pursuits.

There are but few *books* which could be mentioned, as suited to the wants of the infant mind, or successfully adapted to the business of elementary instruction. The current volumes of natural history are too extensive in their plan, or are so largely devoted to rare and foreign animals, as to be unsuitable for very young children. A book of domestic animals, with correct and neat engravings, would be very useful in this department. *Worcester's Primer* will be found serviceable to children old enough to use it. But a simpler book still would be better. *Fowle's Child's Arithmetic* is, on the whole, well adapted to its objects; so also is *Emerson's North American Arithmetic*. A *slate* and *slate pencil*, put into the hands of children who are capable of using them, with permission to draw and print, are an excellent means of employment and of improvement. The *Child's Song Book* will be found useful in any attempt to teach simple tunes to little children, and a volume of suitable drawings or engravings, selected as already mentioned, would afford much useful instruction, as well as entertainment. Such, however, is the scantiness of supply in all these departments of publication, that no book can be mentioned with exclusive or unqualified approbation. The teacher must expect to find all such aids in need of modification and improvement. He must look to the minds of his little charge themselves, to ascertain what he and they need; and he must, after all, draw largely from his own resources for methods and materials.

The great means, indeed, of improving elementary education we must look for in *the character and qualifications of teachers themselves*. One prevalent and fatal error must first be corrected,—the impression that little is required of an elementary teacher, and that any person is competent to such an office. No mistake could be more prejudicial to education

than this. To teach an elementary school, with even a moderate degree of success, demands a depth and variety of intellectual and moral qualifications, which no other office in education, in any of its departments or stages, ever requires. Eminent attainments in a single branch of science or of literature, with a facility in imparting knowledge, are all that can be justly held indispensable to instructors in what are called the higher branches of education, or in the higher order of institutions. It is not so with the elementary teacher : he must possess, in the first place, a degree of moral perfection which no other teacher has occasion to exercise ; he must understand the nature of the young mind on which it is his business to operate ; he must have an extensive knowledge of the physical and moral, as well as the intellectual nature, of the human being ; he must possess an active imagination, an affectionate disposition, a mind judicious and ready in expedients ;—in a word, a truly intellectual character. Persons who do not possess a good degree of all these qualities, are unfit for this employment ; though they may become useful and respectable, and enjoy a solid happiness in pursuits less trying to the texture of the soul.

The female sex are especially adapted to the office of early instruction, by their native tenderness, their ready observation, their apparent adaptation to occupations demanding a minute and varied attention. But where shall we find that range of thought, that disciplined perfection of mind, that untiring corporeal strength, which are all indispensable to the successful teaching of infancy ? To improve early education, we must afford more liberal advantages of instruction to the generality of the female sex. They themselves must take more vigorous measures to secure and prosecute the best opportunities of intellectual advancement,—not those merely which can be commanded by resorting to a distinguished school, but those, rather, which alone are worthy of the name ;—extensive reading, thorough investigation, vigorous application of the individual mind to all that concerns the happiness of human beings.

To the question, 'How far can the infant school system be advantageously adopted in primary schools?' a general answer only can be given. Methods and exercises which might be both appropriate and useful in one school, and under the management of one teacher, might not be so in other circumstances; as must obviously be the case in the different condition of schools in the city, and those in the country,—of those which can be liberally supplied with books and pictures, and other means of interesting and instructing the infant mind, and in those in which the supply of materials of this description is limited. The main point to be desired, is, that the teacher should possess, in his own head and heart, the *spirit* of infant education, by which he will be enabled, in a great measure, to create the aids of which he stands in need, and to make up, by fertility in mental resource, what may be lacking in external means.

To the teacher who possesses the proper qualifications for early instruction, materials will not be scarce or difficult to command; a flower, a leaf, a grain of sand, even, if rightly presented to the attention of infancy, will afford ample materials for thought and conversation, and embrace more elements of useful knowledge and of mental pleasure, than ever can be derived from the routine of common books and formal tuition. An exact prescribed course of operation is not desirable in the instruction of young children. Their nature craves variety and change; and a judicious mode of education will regard, with as ready attention, the obvious appetites of the mind, as those of the body.

The chief things to be done, for the improvement of primary schools, or with a view to assimilate them to infant schools, may be briefly recapitulated under the following heads.

1. The attendance of very young children should be encouraged.
2. A suitable play-ground or play-room should be provided for every school.
3. Every exertion should be made to render the school-

house or room, and the school furniture, conducive to health and comfort.

4. The school exercises should be often varied, and the attitude of the children frequently changed.

5. Motion, at short intervals, should be a part of regular school exercise.

6. The school should be controlled by management rather than government.

7. A mild, affectionate, and judicious treatment of individuals, should be substituted for general laws and penalties.

8. Conscience, judgment, affection, sympathy, and not fear, should be employed, on all occasions, as means of moral influence.

9. Pictures, conversation, and stories, and, if possible, plants and animals, should be the chief sources of instruction; formal lessons being carefully avoided.

10. Exercises or lessons of any description should be very short as well as perfectly simple.

11. All lessons should be strictly adapted to the existing powers and capacities of infancy or childhood: nothing should be taught which is to be understood by and by. The true way of teaching a child is not to anticipate or to inculcate anything, but to exercise his faculties on objects to which they are at present equal; leaving the result to take place in its own good time.

12. All learning by rote should be most carefully avoided.

13. Whilst uniform succession of employments, and mechanical routine, are strictly shunned, regard should always be had to the different states of mind and body in which school hours can be most advantageously spent. The first part of school time should be devoted to the direct influence of the teacher's mind on his pupils, by conversation or instruction; the second portion, perhaps, to the action of the children's own minds, in telling again to their teacher the story he has read or told to them;—in writing, (if old enough,) what they remember of it, on their slates; in reading, drawing, counting,

or in any other form of mental activity. The third portion may be given up to play or recreation of any proper kind. The fourth to the contemplation of pictures, or to hearing or joining in simple strains of music, or hearing or saying appropriate pieces of poetry. Bodily exercise should be connected with many, if not most, of these exercises ; and rest and sleep, if necessary, should be interspersed with action. But much of all such arrangements must be left to circumstances, or rather to the exercise of individual judgment in the teacher.

14. Children old enough to be instructed in the common elements of school education, should be taught, as nearly as may be, in the manner adopted with the youngest class of pupils,—by rational, interesting, and practical methods.—Few or no books being exactly adapted to the instruction of children in reading, an expedient such as the following may be advantageously adopted. Let the teacher be provided with a large black board or slate ; and when he can find a large, well drawn and well colored picture of an animal, or of any other object intelligible and interesting to childhood, let it be suspended over the black board : let the children be asked a few simple *questions* about the form, the color, and the habits of the animal,—if such is the object selected. The ideas elicited by these questions, should be embodied, by the teacher, in a few short and easy *sentences* of familiar words, and *printed*, in large and distinct letters, (capitals, perhaps,) on the black board. Every sentence, (and there should be very few,) should then be slowly and distinctly *read aloud* by the teacher, and repeated several times ; the children being permitted to join their voices with his. The next stage of the exercise is, that the teacher should select a few of the prominent *words* of the lesson, and place them in a column by themselves clearly and distinctly printed. These the children should compare with those contained in the regular sentences, pronouncing them distinctly along with the teacher. Two or three of the *letters* which happen to occur oftenest in the words printed, should now be selected and placed by themselves, in large and dis-

tinct form, and be compared with those which occur in the words of the lesson, and their names, or rather, their sounds, distinctly repeated by the teacher and the pupils. Those of the children who are of sufficient age and ability, should now attempt to transcribe the whole or part of the lesson, on a large black board or slate, placed conveniently for them. The youngest should be furnished, each with a few sets of letters pasted on small blocks of wood, or with plates of tin with the letters of the alphabet stamped upon them. With these letters they may 'set up,' or compose, the lesson for themselves on the flat part of the surface of their desks, or on a common school slate. Reading and spelling may thus be taught simultaneously, and in the form of active and pleasant employment, while counting the letters and telling their forms may serve, if rightly managed, to impress on the mind some useful elementary ideas in arithmetic and geometry. These exercises should be continued, perhaps, during the whole of the time that children are employed in learning to read; the nature of the exercise being adapted progressively to the capacity of the learners, and embracing the elements of intellectual and moral discipline, by a proper attention to the subject of every lesson.

Books, when suitable ones can be obtained, may be ultimately employed instead of the lesson on the teacher's board; and the pupils may now be accustomed to vary the language of the story by substituting their own forms of expression. A few of the words of every lesson may be selected to be defined and embodied in sentences, on the slate, by the children themselves. Clear and distinct conceptions will thus be acquired, and the meaning and force of language receive their true and full value. Subsequently, the pupils may be permitted to write a letter or story, on their slates, and read it to their teacher. By this means the false tones of voice usually acquired from the formality of school exercises, may be avoided, and a natural and appropriate elocution acquired; the basis of it having been already secured in the distinct and correct enun-

ciation of words and letters, in the elementary lessons before mentioned.

15. The elements of penmanship may be very conveniently taught, so far at least as regards the forms of letters, by the use of the black board and the slate.

16. Simple exercises in arithmetic may be prescribed in the same way.

17. Formal lessons in geometry and astronomy can only prove useless, or worse than useless, to very young children. But a few of the solids, corresponding to the shapes of common objects, may be used, to good advantage, as the basis of correct ideas of form. Thus far apparatus and other illustrations may prove highly useful.

18. Teachers of elementary schools should, if possible, prepare themselves for teaching the rudiments of drawing and singing.*

19 A great means of immediate improvement in the business of teaching, may be found in the opportunities afforded by the instruction imparted at the meetings of Lyceums and teachers' associations; if these are aided, as they always should be, by the use of an extensive and well-selected library, and are regarded as merely the outer gates of knowledge, whose inmost treasures are never to be won but by the efforts of individual diligence and personal investigation.

* Much assistance, in relation to vocal music, may be justly expected from a work now in press, compiled by Mr Lowell Mason, from materials collected by Mr William Woodbridge, during his residence in Germany and Switzerland.

...of the ...

1. The following is a list of the names of the persons who have been appointed to the various positions in the organization of the American Society of International Law, for the year 1910-1911.

[illegible]

17. Physical Education - This course is designed to provide students with a comprehensive understanding of the principles and practices of physical education. It includes topics such as anatomy, physiology, and the history of physical education. Students will also engage in practical activities to develop their physical fitness and motor skills.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861. It is a copy of the original letter, and is signed by Abraham Lincoln.

1. The first part of the document is a letter from the President of the United States to the Secretary of the Navy, dated 18th March 1899. The letter is addressed to the Secretary of the Navy, Department of the Navy, Washington, D.C. The letter is signed by the President of the United States, William McKinley.

MR THAYER'S LECTURE.

MR THAYER'S LECTURE.

LECTURE IV.

ON

THE SPELLING OF WORDS,

AND A RATIONAL METHOD OF

TEACHING THEIR MEANING.

BY G. F. THAYER,

PRINCIPAL OF CHAUNCY-HALL SCHOOL, BOSTON.

THE subject on which I have been appointed to address you, is, I am aware, when compared with many others, of inconsiderable moment. Still, it was thought to be worthy the attention of this Association ; and, in accepting the invitation of your Committee to treat upon it, my duty to them and to you, requires, that it should receive all the consideration which its intrinsic importance demands.

I shall detain the Institute but for a very short time, in this lecture, because its subject is one very simple in its nature, and not fairly admitting that scope, which those of a more diversified character might seem to invite.

It is a matter of fact topic, which demands simple statements, rejecting all ornament and amplification. I shall, therefore, be brief, plain, and direct ; and not aspiring to offer a single new idea on this branch,—lying at the very threshold of the temple of education,—to those who have ministered any long time at its altar, I shall hope rather to aid those who have been recently invested with its robes.

Experience would perhaps suggest to most minds, seeking for improvement, a course of teaching not dissimilar to that which I intend to present to you ; but to save the time to the young teacher, and to enable him at once to avail himself of the experience of others, that the progress of his pupils may not be retarded while he is acquiring a personal knowledge of his art, cannot, as it appears to me, but be a desideratum.

Correct spelling I shall assume to be *necessary* ; 1. because on that, in a degree, depends our understanding of written language ; and it would not be difficult to show, that, in a language like ours, derived from so many sources, the very opposite idea from that intended to be conveyed, may be expressed by the omission or transposition of a single letter.

2. Although correct spelling is more rare than a thorough acquaintance with the sciences, still every man is a critic in it, and inflicts the penalty of ridicule upon those who transgress its rules.

3. It is important in the education of the young, as it leads to habits of accuracy in other things, in which the want of accuracy might be far more fatal to our own interests and happiness. He who is exact and careful in trifling affairs, seldom, if ever, fails to be so in more momentous concerns.

4. The state of literature generally, and especially the estimation in which thorough education is held, may be inferred from the correctness or inaccuracy of the manner of spelling a language.

5. Good spelling is essential to the permanency of a language. By this alone are we able to trace many words to their etymology, without a knowledge of which,—although we may understand their current use,—we may be entirely ignorant of their signification when originally adopted into our language, and consequently fail to enjoy the authors of past times.

6. It is also important as it respects the effect of our works on nations speaking other languages, both as to the conveni-

ence of foreigners in learning the English, and especially as it relates to translations into other languages, in which the author's fame and a nation's improvement may be implicated.

Some men of rare genius have, it is confessed, delighted the world with their sublime conceptions and harmonious numbers, or illuminated it with the results of their philosophical researches, or dazzled it with their metaphysical speculations; though, from neglect in their primary education, they have been very defective in the elements of their native tongue. But this offers no plea for neglecting to acquire a correct orthography. Their mental achievements were not the result of this deficiency; and however the splendor of the works of genius may have obscured or hidden their defects for a time, we are compelled to admit them as defects, and hence to abate some portion of our estimation of the authors.

Having established the utility and necessity of correct spelling, I proceed to point out what I consider the best means of conferring on the young so desirable a benefit.

Being chiefly an exercise of the faculty of memory, it should be one of the first studies undertaken at school; and should be persevered in, with unremitting constancy, till unfailing accuracy crown the labor.

It is a great mistake to permit the higher branches of learning to supersede this, before it be thoroughly acquired; for, if it be not attained in the first few years of school education, the individual will probably remain deficient in it through life.

Numerous as are the innovations in, or, to adopt a more acceptable term, new methods of, teaching the various branches of education, at the present day, I hold those only to be *improvements*, which present the subjects in a more practical form; which will require the least change from the school method to that to be pursued in the business of life.

If, then, we look for a moment at the common mode of teaching spelling; viz. to assign one or more columns of words, in a *spelling book*, to be 'committed to memory,' and uttered by the voice, letter by letter; we see one entirely at va-

riance with practical instruction, tedious to the pupil, expensive in time to the instructor, and *never to be used in after life*; of course, one that needs reformation, and in relation to which almost any change would be an improvement.

A preferable course would be, to assign a portion in the reading book of each class, to be written on slates to dictation, and subsequently examined by the teacher or monitors, who, after checking any errors that might occur, should return the slates to their respective owners for correction—by the book, or otherwise.

By this method, a whole school may be simultaneously engaged in the exercise, and a hundred pupils, in five distinct classes, may write twenty words each, in fifteen minutes or less—every class from its respective reading book—the teacher naming the *number* of the class, with its respective word to be written, and passing on to another class; so that, by the time five words have been given out to as many classes, the first of them will be prepared for another word.

And here let me urge upon the teacher the indispensable necessity of a *perfectly distinct* articulation, especially as to the vowel sounds. Without it, the pupil will often misunderstand the word, though several times repeated; and with it, he is able not only to understand the word at its first announcement, but catches from his master that clear enunciation and correct pronunciation, which constitute the clearness and efficacy, I may say the great charm, of spoken language. If this be neglected, and the word be uttered in that careless and slovenly manner which we too often hear, even from teachers themselves, no censure should attach to the scholar, how numerous soever may be his errors. For example;—let the word be *disposition*; let it be pronounced, as it is in a majority of cases, *disp'sition* or *disp'osition*, and I defy any man to say, at once, which of the five vowels would best supply the doubtful syllable.*

* A little work, entitled 'Lessons in Enunciation,' by Wm. Russell, has recently been published, which presents the current errors in pronuncia-

If the school under my own care has made proficiency in anything, it is in this department ; and I attribute it not more to the general method of teaching pursued by us, than to the great exactness in the mode of pronouncing, and the invariable rigidity with which a clear and distinct articulation is exacted and enforced.

If the pupil be required, after correcting his failures, to transcribe the words missed, into a book kept for the purpose, he will be less liable to repeat the errors when the same words shall again occur, and will, in time, have made a collection of those that require his greatest care in their application, and which might, in themselves, furnish profitable lessons for review.

In this connexion, I would suggest, that the transcribing of good composition, beside aiding to furnish the mind with various other knowledge, is of essential service in fixing, by habit as well as by memory, correct methods of spelling.

In spelling lessons, at first, the pupils should be required to write every word containing as few as *two* letters ; but as they advance, the more difficult words only should be selected. In this selection, the attentive teacher will soon be led by his own experience to perceive, that it is not the *longest* words which scholars are most liable to misspell, but rather those that are common in sound to many others in the language, of a different combination of letters : such, for example, as *receive*, *believe* ; *compeer*, *cohere*, *grenadier* ; the verb *hear* and the adverb *here* ; the pronoun *their* and the adverb *there* ; a regular noun in the nominative or objective case plural, and the possessive case singular ; participles of regular verbs, in which a doubt may exist whether the consonant preceding the final syllable, be double or not ; as in *committed*, *benefited*, &c. Also, in words where *able* is added to *c soft*, as in *peaceable*, and

tion and articulation in so distinct a view, as to be highly valuable to teachers and all persons of taste in these branches of elocution. Teachers of reading, especially, would derive important aid from its rules and suggestions.

to *g soft*, as in *changeable*; in words beginning with *in* and *en*, as *inquire*, *enclose*, *indorse*, *entrap*; in words ending in *er* and *or*, as *instructor*, *preceptor*, *visiter*, *sailor*.—Many of these have been thrown into distinct exercises in spelling books, and may, with much advantage, be learned by pupils at a very early age; a recurrence to them, however, as they may be met with in the reading book when used for spelling lessons, will always be found useful. Some of Murray's rules, as given in his book of Exercises, especially the fifth, ninth, and tenth, would afford much aid; although the exceptions are so numerous, as to forbid an implicit reliance upon them.

Beside these *classes* of words, there are many of irregular formation, which are more frequently spelled wrong than right; among these are the following—wagon, pony, balance, saddler, wo, ay (meaning yes), basin, buffalo, expense, absence, melancholy, lily, ennoble, possess, disappointment, recommendation, until, off (adverb), oblige, trousers, separate, too (adverb), college, &c.—To these may be added several proper names of persons, such as Catharine, John, Eleazer, Eleanor, Jesse;—and of States, such as Louisiana, Pennsylvania, Mississippi, &c.

I have said the lessons in spelling should be given from the *reading* book, for the following reasons; 1. most spelling books contain many words which are seldom found in English composition, hard to learn, and almost useless when learned—to the exclusion of simple, common, and consequently useful words.

2. Few spelling books, if any, are adapted to the capacity of very young children; but in general, excepting a few of the first pages in the book, are made up of long and difficult words, much above the comprehension of the scholar.

3. They are, for the most part, so encumbered with notations for accent, pronunciation, &c., that although the teacher may be aided by them, the pupil is perplexed and embarrassed.

The department of reading books, on the contrary, is very fully supplied with such as would meet the wants of every

class of children ; especially in their primary instruction. A difficulty, however, exists here, and one, too, of no trifling consideration. The compilers of these reading books, spell certain words very differently. We find in some, positive errors ; here, an author, whose book is perhaps in the hands of your youngest class, adopts the orthography of Perry ; there, is a book used by your next class, which follows Johnson ; another takes Walker for his standard ; and a fourth varies in some points from all three ; while a fifth, professing to follow rigidly the most *fashionable* guide, either from ignorance or carelessness, deviates, most widely in many cases, from his own criterion ; beside spelling the same word variously, in different parts of the book.

It is true, an attentive teacher may meet the evil by oral explanation and remark ; but while the pupil has the printed guides in his hand, he must inevitably be confused, in many instances, by the inconsistency he discovers. Besides, in numerous cases, instruction in the department of spelling, must be entrusted to the elder scholars ; in monitorial schools almost wholly so. Hence, very imperfect instruction will be the result.

Among the good reading books, in use with us at the present time, are, the American First Class Book, the National Reader, and the Introduction to the National Reader, all by the same author, who has not only compiled them with very great care and taste, as to the style of the compositions as well as to their moral tendency, but who has given more than ordinary attention to the spelling of the words ; so that they form a series for three classes, containing as few variations from the standard assumed—and that the most popular among us at the present day—as can be found in any other three books in the language. In the spelling of some classes of words, which I shall have occasion to advert to hereafter, I should not perhaps adopt the same rule which he has adopted ; but as they are few and very distinct in their character, the variations can be easily explained, and remembered by all pupils, sufficiently advanced to use these books.

The same gentleman would render the cause of education a service, by continuing his labors, until all classes of pupils, from the oldest to the youngest, should be supplied with books for reading and spelling, from one source—by which a uniform standard might be observed throughout.

The wishes of those teachers who might be unwilling to forego the use of the *spelling* book, could be attained by a series of books, prepared with reference to each particular class; beginning with one containing the alphabet and such simple words as the child himself would naturally understand and use, and advancing, by very gradual steps, in several separate books to the most difficult words in the language.

The words to be spelled might first be embodied in interesting stories, and afterwards arranged in columns,—in the manner of Worcester's Primer,—which, presenting them in two different aspects, would make a more permanent impression on the memory.

Several advantages would arise from this plan; 1. the various books would necessarily be quite small, and a child could entirely master the contents of each, before it would be worn out; which is far from being the case with the spelling books now in use. Hence the plan has economy to recommend it.

2. The pupil's advancement would be much more agreeable to himself, and consequently more rapid; as he would *travel in the light*, comprehending all he learned. He would be stimulated to effort, by passing onward from book to book, as he would realize a promotion at every change.

In the use of the spelling books now in our schools, it becomes necessary to *review*—to pass through them several times; and after all, the lessons are not retained, for the pupil becomes tired of the book; he has used it too long; it has been a dull companion to him. He never studies it the second or third time with the same spirit as at the first; whereas, a new book is taken up with an eagerness and freshness that the novelty of it inspires, and produces proportionally increased benefit.

Another advantage will be suggested, when I come to speak of *defining* words, which was a subject connected with that of spelling, assigned to me by your Committee.

Were spelling books, such as have now been recommended, once introduced, I am not sure but that the advantage would lie on their side, even when compared with books exclusively for reading. One superiority they might be made to possess, especially with the younger classes; I mean that which would arise from methodical classification of words. By arranging the lessons analogically, the manner of spelling would be more easily learned, and on the mnemonical principle longer retained, than if taken up promiscuously. Still, I would not have the lessons entirely unaccompanied by exercises from the reading book. And from what book soever or by whatever mode they might be *studied*, the *evidence* of the study should, in all cases, be rendered *in writing*.

On this point I would venture one general remark; which is, that in all branches susceptible of it, the exercises—the results of study—should be presented to the *eye*, as the best organ of communication with the mind. Whatever is acquired through this medium, is better retained than when entering through any other. It may be said, *the eye remembers*. It is more *attentive* than the ear. Its objects are not confused. It takes in a single and perfect image of what is placed before it, and transfers the picture to the mind. Hence all illustrations in our teaching, which can possibly be addressed to this accomplished organ, should be so applied.

The mode of performing orthographical exercises now recommended, is not, it will be observed, a mere substitution of a more expeditious and effective method of accomplishing a spelling lesson. It implies the adoption of a different principle of operation from that which generally prevails. It proceeds upon the great principle of calling the mind into action in a practical and useful way, instead of one which is arbitrary and mechanical. It demands of the pupil, not a mere listless attention,

or a transient effort of recollection, but an active exercise of his powers, such as corresponds to the occasions of business in after life. The senses, even, are employed, and the perceptive power in young minds is so slight and evanescent, that such aid is to them indispensable. Attention and memory are made to keep pace, in such forms of exercise, and it is the dissolution of their natural connexion, which, in any case, gives rise to errors in orthography. What is needed in this department of instruction, is, that the pupil have prescribed to him such forms of exercise as shall prevent that mechanical and abstracted attention, which belongs appropriately to a higher stage of his advancement—that in which memory, having become perfectly true and faithful in its office, the power of attention may be safely permitted to glide into a comparatively dormant or unconscious state.

One of the great intellectual benefits of instruction in this department, is to keep the mind in wakeful, voluntary, and efficient attention—a result which can be attained only by practical expedients. The usual mode of performing spelling lessons, fails entirely in this respect, and indeed much of the pupil's success in it depends on an inactive state of mind, in which all the faculties are merged in an arbitrary flow of memory. Practical methods of instruction, involving the cooperation of our pupils themselves, in all that we require as exercises or lessons, have in all cases the recommendation, which, though not always a primary one, is, nevertheless, important in a high degree—I mean the immediate happiness and cheerful diligence of the young. The prevailing method of managing lessons in spelling, is commonly attended with a comparatively dull and languid state of mind, which contributes, along with other things, to render school exercises listless and wearisome. The effect of such states of feeling, is to be dreaded, not merely because it is less favorable to immediate improvement, but because it tends to entail on the mind, habits which are injurious to its powers, unfavorable to their free and generous developement, and at the same time, silently

destructive of that freshness and vigor of corporeal sensation, which is indispensable to happiness in youth, and to habitual activity in manhood. All exercises in every department of education, should, as far as possible, be of an active, and not of a passive nature.

Organization, we have heard, bespeaks a design for action.* This should not be forgotten, even in those employments which are purely mental; and perhaps we should find less injury resulting to health from school education, were school exercises of an active and enlivening nature to an extent which is easily practicable. It is perhaps too true of all the stages of education, from the lowest to the highest, that they are planned with too much reference to a recipient and passive state of the mind; that they presuppose and demand *inaction* as a matter of habit, and thus tend to produce a mental character, which, although it may be of occasional advantage in a given branch of study, is precisely that which is not required in the business of life, nor in those stages of intellectual pursuits, in which the student is required to advance for the purposes of discovery and invention, carrying with him all his energies in full and constant activity.

I may be pardoned, I hope, this brief digression; for it is of inexpressible moment, that, in the whole course of education, and especially in its elementary departments, and in its operation on the susceptible faculties of early life, we should keep a constant eye on the probable *result* of all our methods, and their influence on mind and character. In the humble routine of the daily exercises of school, there are principles at work on the intellectual habits of the young, which may give a color or determination to the whole mental being; which may lead to intelligence, moral purity, and happiness for life, or to results of the opposite character, and as lasting in their effects.

The existing diversity in the modes of spelling English words, each defended by high authority, will present to the

* Vide Dr Warren's Lecture on Physical Education.

young teacher—who may be desirous of escaping from the shackles of local custom, and establishing for himself, a standard independent of considerations so narrow—much perplexity. Especially when he perceives that fashion is as fickle in this matter as in any other. In this dilemma, I would recommend to him, to adopt the style that is *coming up*, rather than that which is *going down*. Johnson's authority is perhaps better than that of any other lexicographer,—but in several classes of words, his mode of spelling has had its day and has become obsolete.

Many of the writers of this metropolis and vicinity, have adhered to the *k* in the terminations of polysyllables, as in *musick*, *ecclesiastick*, and the like; and to the *u* even in words like *errour*, *terroure*, &c. until, in this respect, they stand alone, or nearly so. Most of the accomplished writers of our own country and in Great Britain, have dropped the *k*, and very many the *u*, in these two classes of words. The best periodicals in both countries have done so; and it is plain to perceive, that this mode will eventually prevail to the exclusion of the other. I consider it the *improved* mode, because any method which tends to simplify, without doing violence to etymology or the genius of our language, is a decided improvement.

The letter *s* is also taking the place of *z*, in words having the *z* sound, and so continually is this change going on, that one can hardly decide which is right *to-day*, from knowing what was so *yesterday*. The best periodicals incline to a very general use of the *s*, although there are still many exceptions, and—as a foreigner must be led to think—much caprice on the subject. For, what good reason can be offered in defence of the practice of spelling surprise with an *s*, and apprise with a *z*?

Some have ventured to drop the *z* altogether, in words of this class, and even in words like organization, to substitute the *s* for that letter.

This fluctuating state of things existing, and there being

good reason to believe that the changes enumerated will become general, both as it respects the pronunciation of words and the new mode of spelling them,—why should not we attempt to effect a uniformity at once? Why should not this Association fix for itself and its members, some mode of spelling—especially as it regards the classes of doubtful words above alluded to—which we would be willing to use, to teach, and defend? If the mode were a good one, we might hope to have it generally adopted in our country. And by publishing a cheap manual on the subject, the variations might be easily placed within the reach of all who feel any interest in it.

It seems to me that we could hardly do the community so acceptable a service, with so little labor, or make one of the subjects of primary education more simple, with so little inconvenience to ourselves. The public are not tenacious of particular modes of spelling. With few exceptions, no prepossessions exist. They wish for *consistency*; they desire to find the English language the same, wherever written or spoken. They need only a responsible leader in the matter. They ask for some standard—some authority,—and if that standard be respectable—that authority worthy, they are willing to be guided by it.

Who then shall constitute that standard? Are any more naturally so than men of education, engaged in the profession of educating others? If teachers are what they ought to be in this distinguished office, they are most competent to decide on the question under consideration. I hope they will decide it for themselves, whether the community at large acquiesce or not in their decision.

I cannot, without injustice, omit to mention, in this place, the name of NOAH WEBSTER;—a man who has devoted more time, labor, and profound research to the English language, than perhaps any other man who ever studied it. Twenty-five years—the most vigorous in mental power, of his whole life—given to an examination into its genius, structure, etymology, and current use among the best educated persons

who speak it, having stored his mind with a fund of the most valuable information on the subject, invest his opinions with a claim to consideration beyond that of most other men of this or any other age.

The result of his labors is the voluminous and excellent dictionary recently published by him, which, as far at least as any other now known, deserves to be adopted by his countrymen, as the standard of orthographical accuracy. For, although many innovations have been admitted into it by him,—some of which being peculiarities of his, we could have wished he had suppressed,—yet a large share of them must be deemed positive improvements, and as such we may hope ere long to see them come into general use.*

On the subject of defining the words of our language, my opinion is, that the only effectual method of doing it with young pupils, is, 1st. by oral explanation during a lesson in reading or recitation. And no word should ever be passed over, from the first of a child's reading in sentences, without his comprehending fully and distinctly its meaning. For which reason, I am the more in favor of the kind of books—before alluded to—resembling Worcester's Primer, by which the pupil's interest in the story comes to aid him, and renders the teacher's assistance more seldom necessary. If these stories are illustrated by drawings, the advantage is increased, especially in the first two or three books of the series.

2. When the reading lesson, accompanied by all the necessary explanations, shall have been completed, the pupil should be

*Since the delivery of this lecture, Mr J. E. Worcester of Cambridge, has given to the public a Dictionary which is better adapted to the wants of the American community in general, than any we had before seen. It contains 43,000 words; is very neatly printed, and brought within the compass of 400 pages. It has an appendix containing copious vocabularies of scripture and classical proper names, with their proper accent and pronunciation; and a collection of most of the words of doubtful orthography in our own language. It is admirably calculated for the most advanced pupils in our schools, and is highly worthy of general attention.

required to define to the teacher, such words from the lesson as may be given to him, and subsequently to write them on a slate for a spelling lesson ; if he be directed to write the *meaning* also, so much the better will it be for his progress in the language.

3. The next exercise I should recommend, would be a paraphrase of the story, in the pupil's own language, according to his understanding of it ; by which the teacher could ascertain whether he had a correct idea of the whole, as well as of individual words, and also furnish a good opportunity for laying the foundation of the scholar's style.

This exercise would, with the aid above suggested, be found a very agreeable one to the pupil, who would, in no long time, be prepared for the use of the dictionary. This might be first put into his hand, as soon as he should be able to distinguish synonymes. Until then, for the lesson in question, he had better be without one.

4. The teacher now having marked in the reading lesson, such words as he deemed most suitable and useful, the pupil should seek in his dictionary for such as could be substituted for them, without changing the import of the sentence ; when he might either write the original words with their synonymes on a slate, or *read* the latter in lieu of the former—incorporating them into the sentence.

This practice continued for a while, prepares the scholar for reading, with unhesitating fluency, the supplied synonyme for the original word,—in the same manner that a good linguist translates a language at sight, and looking on a page of French,—for example—reads it in correct English.

A sure and satisfactory method of ascertaining that the pupil has acquired the *meaning* of every word along with its *definition*, and to invest him with the highest and most important benefit arising from this exercise, is to require of him to embody every word he is asked to define, in a sentence of his own composing. Such exercise, it is hardly necessary to observe, calls into action all the resources of the mind, and

produces a readiness of thought which is an invaluable acquirement.

It is not to be expected that the pupil will accomplish all this without many failures, and much occasional aid from the instructor, but every step of his progress will tend to make the next more easy, and will, beside giving him a correct understanding of the subject of the lesson before him, lead him to observe those nice shades of difference in words and expressions, without which, he can never write his native tongue with purity and precision.

These methods of teaching spelling and defining, are not merely theoretical. They are the results of positive experiment, practised under my own superintendence, for eight or ten years. And as far as my opportunities have enabled me to compare results with those of other methods of teaching, in these departments, I am satisfied that such as have been recommended,—if not the *only true* ones—are of that practical character, without which all methods must be useless, if not worse than useless.

I have said nothing of the practice, once so common, of assigning lessons in spelling and defining from the columns of a dictionary, sweeping through the whole, from the letter A, to the last word under Z,—if the pupil continued long enough at school to accomplish it,—for I cannot suppose it to have come down to this day. If it had, however, I should feel impelled to pronounce it one of the most stupid and useless exercises, ever introduced into a school—compared with which, the ‘committing to memory’ indiscriminately, of all the pages of an almanac, would be agreeable, beneficial, and instructive.

To say that it would be impossible to remember the definitions thus abstractly learned, would be to assert what must be perfectly obvious to every one. And even if they could be remembered, they would be of little utility; for as the right application of a definition must depend entirely on the situation of the word to be explained and the office it performs in a sentence,

the repeating of half a score of meanings as obscure perhaps as the word itself—conveys no definite thought, and serves rather to darken, than illuminate the mind.

As a book of reference, a dictionary is useful ; although, it must be confessed, that even with the best, one often finds himself obliged to make his own explanation, in preference to any furnished by the lexicographer : and the teacher or the pupil who relies exclusively on his dictionary—without the exercise of much discretion—for the definition of whatever words he may find in the course of his studies, will not unfrequently fall into very awkward and absurd mistakes.

Experience and common sense must lend their aid ; the former to teach us what is practicable ; and the latter, what is appropriate and useful. And the teacher who has the improvement of his pupils and the great interests of education generally, at heart, will not content himself with what he has already attained, but be perpetually striving to add to his stock—by however small degrees, and in however insignificant departments—whatever may make him more accomplished in his profession, and consequently, more worthy of the charge entrusted to him.

The first of these is the fact that the
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MR CLEVELAND'S LECTURE.

THE CLEVELAND LANDS

LECTURE V.

ON

LYCEUMS AND SOCIETIES

FOR THE

DIFFUSION OF USEFUL KNOWLEDGE.

BY NEHEMIAH CLEAVELAND,

PRECEPTOR OF DUMMER ACADEMY, NEWBURY, MASS.

AMONG the schemes of an age fertile in expedients, one of the most recent and striking, is the establishment of societies to promote the general diffusion of useful learning. In the old world, the experiment was not only novel, but bold—evincing in its projectors no small share of moral courage, as well as active benevolence. With us the case is widely different. Rarely, in this country, and in a degree comparatively small, are the advocates of popular education called to contend with that aristocratic pride, or those long-established prejudices, which impede the efforts of its friends abroad. Neither is the task to be accomplished by us, of equal magnitude with theirs. Much has already been done to prepare the way. We have not that Augæan mass of superstition and folly to remove, before an entrance can be effected, or a proper foundation laid. No project, perhaps, could meet and gratify public sentiment among us, more fully than this—of promoting by social effort the mental improvement of the community, down to the humblest of its classes. It is, in fact, but the expansion—the

final developement of that broad system of education, which was founded by the settlers of New England. It is the illustration, the practical enforcement of that which we acknowledge as the only conservative principle of our free institutions.

While, however, we find in a comparative estimate much to encourage exertion, we find also much that calls for it. We cannot go far, from even the most favored spot in this favored land, without finding enough of ignorance, of prejudice, and of false opinion, to justify all that has yet been said or done in favor of popular improvement. And though it is true, that we have not here a privileged class,—families, from whose claims to patrician origin, opposition naturally flows to everything that tends to lessen the interval between the high and the low,—yet even with us may be found those who regard with coldness or dislike, all attempts to enlighten the mass of the community. I stay not to inquire, whether these feelings proceed from unworthy motives, or from honest though mistaken views, or from a conviction of the total inadequacy of all efforts to effect the object. I propose, at present, to consider the question as, in effect, settled. The experiment has been begun. The institution is in actual operation. On both sides of the water, a host, powerful in intelligence as well as in numbers, have engaged in the cause, with a zeal that promises much for its success. Do I hazard anything in presuming, that the great majority of my auditors, have already given it their sanction, and lent it effectual aid?

In considering the subject of Lyceums and Societies for the Diffusion of Knowledge, I will inquire,—what are their proper objects,—and what methods of conducting them, are most likely to obviate objections, and ensure their usefulness?

Their design is evidently different from that of philosophic and academic associations, founded to promote and make known new discoveries in science. Neither is it to be identified with the aims of propagandists in politics or religion. The efforts of these institutions are intended to benefit that large

portion of every community, who, from various causes, have hitherto done but little towards their own mental cultivation. It aims to awaken among them a spirit of inquiry; to excite a desire for knowledge, not only on account of its position and practical advantages, but for its own sake—the pleasure it gives, and the true dignity, which it confers. By lectures, discussions, and illustrations, it proposes to furnish an effective stimulus, and, having awakened desire, to supply the means of gratifying it, by the multiplication and distribution of books.

It is with diffidence that I enter on an inquiry into the best methods of effecting these highly important objects. The subject is as yet, in a great measure, unexplored. The institution has not been long enough in extensive operation, to furnish us, in any considerable degree, with that only safe guide in matters of practice, the light of experience. There has been, indeed, a general similarity in the modes of procedure, adopted by different associations;—but no fixed plan, or uniform system. This is, on the whole, a happy circumstance. From it must result a great diversity of expedients and methods, as varying circumstances and ingenuity shall prompt; and thus, far more effectually than if uniformity had prevailed in the outset, will eventually be furnished the materials of a complete system,—embracing, in its details, all the peculiarities, which may be required by the particular wants and condition of different communities.

The formation of associations, where none yet exist, very naturally claims our first attention. By those, who have not witnessed the process, this is generally supposed to be a difficult task. They cannot believe, that a people, long sunk in apathy, as to every object of education and self-improvement, can, at once, and, by means so simple, be roused to feel an active interest in them. Yet the testimony of a hundred cases, shows that it may be done. Let but one individual in a place know something respecting the object, and set himself heartily about it, and he will be sure to succeed. Let

him assemble a few of his neighbours, and make known to them the plan of a Lyceum and its benefits. Let him encourage them to form themselves into a club, with a few simple rules for their regulation. Let general attention be directed to the subject, by a public address from some intelligent gentleman, such as every vicinity will furnish. Let them begin operations with a familiar lecture on some subject of science or art; or, in lack of that, with friendly discussions,—reading,—and efforts to procure and circulate books. Their Lyceum is now organized; and theirs will be a case of singular exception, if they do not soon find that the excitement is spreading, and their society advancing in numbers and usefulness.

The details of constitution, bye-laws, and mere business concerns, must be adjusted by each society, according to its own convenience. In reference to these, however, there are two or three general principles, which appear to me of primary importance.

From the whole scope and design of societies for the diffusion of knowledge, it is certain that their terms of admission should be so fixed, as to render their privileges universally accessible. This will not be the case, where there is a high entrance fee, or heavy annual tax. Yet we are not to lose sight of that common principle of our nature, that men prize their acquisitions by the cost, more frequently than by the value. Let us avail ourselves of that strong and universal motive,—the consciousness and love of property. If you would sustain an effectual interest, after the first excitement has gone by, let every man pay something; and let those, whom no higher impulse urges, be led to seek their share of intellectual, as some do of grosser aliment, by the desire of securing their money's-worth.

Another consideration, founded on observation of human nature and its tendencies, has been thought of great importance by some of the warmest and most judicious friends of this cause. I refer to placing the management of these insti-

tutions chiefly in the hands of those, for whose immediate benefit they are designed. In most of the societies, which have been formed in England, it is established as a principle, that a majority of the committee of management, shall be of the class of mechanics, or working men. Such a measure, it is thought, has a tendency to promote their independence. Thus constituted, these institutions cannot easily be made instruments in the hands of the designing, for the advancement of selfish ends. But a more important result is the confidence, which it inspires, and the direct, personal interest, which it creates and sustains. In confirmation of what we should naturally expect, we have in favor of this plan, some testimony from experience. In Glasgow, a society for imparting knowledge to mechanics, has been in operation for thirty years, and may be considered the parent of all similar establishments. Here then is the longest and fullest trial that has yet been made. The institution set out without adopting the principle in question. The interest was kept up for a few years, and then subsided. It was at length revived, by giving the management to the mechanics, and has continued, ever since, unabated, and increasing. Mr Brougham, referring to the regulations of the London Mechanics' Institution, says—'Of these, by far the most important, and one, which, in common, I believe, with all my colleagues, I consider to be altogether essential, provides that the committee of management shall be chosen by the whole students, and consist of at least two thirds working men.'

It will be urged, perhaps, that the circumstances of England and America are widely different; that we have not those diversities of rank, or distinctions in society, which create the necessity for such measures. But the difference is of degree, rather than of kind. Are there not here, as everywhere, the distinctions of rich and poor, educated and uneducated, men of leisure and men of labor? Is it not plain to every observer, that there is in all parts of our land, a vast amount of prejudice and wrong feeling, springing solely from this cause,

be it real or fancied? If it be not so, what must we think of the growth and professions of that new political sect, which styles itself 'the party of working men?' One of the most valuable benefits to be hoped from societies for diffusing knowledge, is a removal of the misconceptions, on which such passions and parties are founded. Let them then be so constituted, that they shall not be stumbling-blocks in the way. Let the principles, on which they are started, and by which they are conducted, be such as to ensure the cooperation, and keep alive the interest of those, who most need their influence, and they will furnish the surest antidote to the evil just mentioned. By shedding light on the important subjects of political, social, and personal rights and duties, they will directly counteract the only radicalism, which we need to fear,—the radicalism of ignorance and vice.

There is another provision, of sufficient moment, I conceive, to demand general attention;—I mean the insertion of an article in the constitution of every Lyceum, excluding from its lectures and discussions all topics of controversial divinity, and party politics. The effect of introducing such subjects into societies, whose usefulness, not to say existence, depends upon harmony of feeling and action, must be evident to every one. I know not that evil has yet resulted from this cause. But in a land abounding with zealots of every sect, and prolific of demagogues, is there not reason to fear? Will it not be easier to anticipate, and prevent the evil, than to wait for and to cure it? On these disputed and irritating themes, let us be content with what the newspapers and magazines will furnish; with what we shall be compelled to hear from the pulpit, in the hall, and at every place of public resort. Let there be one spot of neutral ground, where rival combatants may meet in peace, and unite their efforts, in the cause of mutual improvement, and true philanthropy.

Instruction furnished through the medium of such societies as we are now contemplating, may be considered in reference to manner and kinds. Thus far, in this country, the

instruction of Lyceums and Mechanics' Institutions, have been confined, chiefly, it is believed, to lectures. It was natural that this mode, in the outset, should be the most prominent. The first object is to awaken interest where it does not exist, to attract and fix attention. Many may be induced to listen to a discourse, and thus passively receive ideas, who would make no other effort to acquire them. Nor is the advantage slight, even should this prove all. A great amount of valuable information may be imparted by oral lessons. They are aided by the tones of the living voice; and who knows not how effective they *may be* to enlighten, impress, and persuade. Often, too, they are accompanied by sensible illustrations, models, and experiments, addressing the eye as well as the ear; rendering intelligible and delightful many subjects, which, without such aid, are either dark or dry. But, whatever we may think of these advantages, it is on influences less direct, and on ultimate results, that we must depend most. If the thousand popular lectures now annually delivered in our country, are destined to produce any truly valuable and lasting effect, it must be by rousing the public mind; by creating a new taste,—the love and industrious pursuit of knowledge, where now all is apathy and indolence; by prompting men, in fine, to mould and educate themselves. We have, already, gratifying evidence of some such results; and may we not confidently anticipate a great deal more?

In the accomplishment of this object, much will depend upon the fidelity, ability, and good judgment of those, who lecture; much, on the judicious choice of subjects, and a plain, perspicuous treatment of them; much, in those on scientific topics, upon experiments, or other sensible helps,—and in all, it will be desirable, that the limited and true uses of this mode of instruction be frequently pointed out. Let those, who attend upon lectures, be often reminded, that they are not meant to be, and never can be, substitutes for patient investigation.

The inquiry here arises,—In what other ways may social effort be directed to the accomplishment of the object in view?

Fully and satisfactorily to answer this question, we need the aid of a longer and more extended experience.

Familiar discussions have been recommended, and, in some instances, adopted. These, if rightly managed, promise much good. But they must differ materially from the exercises of a mere debating club. A Lyceum can hardly subserve its true design, if made the arena where a few champions display their adroitness, in making 'the worse appear the better reason,' or showing that 'even though vanquished, they can argue still.' Its design is to elicit truth, to convey information; not merely to make able debaters, to whet the weapons of forensic warfare, or to add a single incentive to the general rage for speech-making. The aim, in such an exercise, should be, to make it easy and familiar, and to encourage as many as possible to engage in it. It will succeed best where the number assembled is small. It may then resemble the animated conversation of a circle of friends, possessing knowledge, and seeking more, not avoiding collision of opinion, yet never contending for victory alone.

Probably much benefit will be found to result from the division of large societies into classes of moderate size. The principle of classification may be similarity of pursuit, contiguity of residence, parity of age, or any other, as circumstances shall indicate. At the class-meetings, reading, conversation, and instruction may be introduced without difficulty. The classes may select their own branches of study;—or, to them as so many standing committees, the managers of the Lyceum may assign special topics for consideration. The thorough investigation and discussion of these, will be of the highest service to the individual thus engaged, while, at stated times, in the form of reports, or otherwise, the concentrated results may be given to the whole body. As branches of Lyceums, or in connexion with them, associations of school-teachers have already become common, with results, as we might expect, highly favorable to both master and pupil.

Mr Brougham, whose sagacity no scheme of utility escapes,

and for whose philanthropic spirit no effort or plan for doing good, is too humble, recommends that artisans working in the same room, and in occupations not too noisy, should keep one of their number reading, while the rest are employed. The expense might be defrayed by a little additional effort of the men; or a boy, or girl might be engaged for the purpose, at a very slight cost. The suggestion seems to me particularly useful for us. Are there not in our country, many hundreds of shoemakers' and other shops, which, by the aid of a little encouragement, and a judicious supply of books, may be converted into schools of mental and moral improvement, without diminishing either industry or profits?

The subject of *books* and *apparatus* may properly be considered in this connexion. No one can doubt, that ready access to suitable books, is one of the most important auxiliaries to this cause. But to secure continued attention to them, it is not enough that books should be accessible. Of this, the fate of many a parish and social library, dispersed, or sold at auction, is ample proof. Some permanently exciting cause is needed,—and the want, is, we trust, to be supplied by the exercises and influence of Lyceums. Under a new impulse, the old and languid associations may be revived, and libraries now independent of each other, and accomplishing but little, may be united and made effective. The subject of books will call for particular attention and greater efforts, where no public collections yet exist. It has been suggested, as likely to be of beneficial tendency, to allow the members of book-clubs to name books to the amount of their subscription. Small neighbourhood associations have been found highly advantageous. Books and periodicals are procured and pass from house to house, at a slight annual expense to each individual. By suitable arrangements between different neighbourhoods, or between the respective classes of a Lyceum, the *circulating* system, so popular in Scotland, might be successfully applied. Such little and cheap itinerant libraries, travelling round from village to village, or from school to school, soiled and

worn as they may be,—how much more usefully and more honorably employed, than many a splendid collection, reposing in guarded alcoves, and upon inaccessible shelves !

The aid afforded to *scientific* studies and lectures by suitable apparatus, render it an important object of attention. A few societies, whose means are ample, may command, in this respect, whatever they please, and will do well to import articles and models of finished workmanship, for the benefit of our own artists. But in a great majority of cases, expensive apparatus is out of the question. Fortunately, we have good reason to believe that the demand will create the supply. By due attention to simplicity and economy, much has already been done. Many valuable instruments may now be obtained, at a charge so moderate as to be beyond the reach of but few. It is not, probably, new to most of you, that for about thirty dollars each, sets of pneumatic apparatus may be obtained in this place, by which may be illustrated satisfactorily, all the principles that can be shown by the corresponding articles in a college cabinet,—among which the air-pump alone used to cost several hundred dollars. Similar results may be anticipated in other branches. But, without waiting for these, how many illustrative articles of cheap construction may be furnished anywhere, by the aid of a little ingenuity. This is particularly the case in mechanical philosophy, in electricity, and in chemistry generally. Need I allude, in confirmation, to the memorable examples of Scheele, Priestley, and Black, or to the famous thermometer and phials, which, in the hands of Watt, led to the developement of important principles, by the application of which he was enabled to construct a machine, that now spins and weaves the clothing of half the world ?

It is not improbable that there has existed in some of our smaller communities, unnecessary discouragement in regard to this matter. They have not been aware how easily many of those useful helps might be procured, nor yet how much might be accomplished without them. Let them be disabused of this mistake.

You will indulge me in a few remarks, in regard to the *branches of knowledge*, to which the Lyceum may, or ought to be made a means of directing public attention. Hitherto, as lectures have been the most common method of instruction, the sciences, to which the mode is perhaps best adapted, have been the most frequent topics. The alluring nature of many of these, the visible and tangible forms in which they may be exhibited, their practical bearings, their direct and intimate connexion with improvement in the arts, and the comforts of life, are circumstances that very naturally account for the attention they have received. And I believe that the desired impulse can be given so well in no other way. I would say nothing to discourage the continued or ever increased cultivation of a department of learning, which combines, in so high a degree, utility and pleasure. I am confident, however, that few candid and careful observers of the times, will deny that there is a prevailing inclination in favor of mere physical science, calculated to give it undue elevation on the scale of knowledge. On the many evidences of this fact, I cannot dwell; but it will be in point for me to say, that I have noticed in some of the journals of the day, not without apprehensions of their injurious influence, more than one statement of the objects of a Lyceum, which seemed to recognise the importance of no science, but that which relates to matter. A society, formed for the diffusion of knowledge, surely cannot fulfil its high destiny, if it fall in with this practical tendency of our age. Indeed, it cannot fulfil it, unless it exert a counteracting influence, by giving to other equally or more important branches their due estimation. Let those, who possess the ability and taste, employ every timely occasion and all judicious methods, to promote in the community, the cultivation of those improving and ennobling studies, mental and moral philosophy. I need not remind you how many expedients to accomplish this, will present themselves to a mind anxious to be useful, and ingenious in doing good. History and biography, embodying, under the interesting form of narrative and fact, so many ab-

stract truths, and presenting impressive examples of vice and virtue, will be found valuable auxiliaries in this undertaking.

A knowledge of the great principles of general politics and political economy, is a matter of so evident and deep concernment to the citizens of a free country, that it deserves an ample share of regard, and can hardly fail to secure it.

The claims and value of mere literature, and of poetry in particular, will not perhaps be so readily allowed. The tentative and comparative character of these studies; their total want of that demonstrative quality, which is the grand essential with mere practical men; their connexion with the imagination, a power that often misleads; and their having little to do with the gains, motives, and pleasures of a mere material life,—are reasons that sufficiently account for their being often undervalued, and sometimes condemned. From their very nature, their effects are gradual and internal; displayed, not in additions to the visible comforts of our physical existence, but in refining and elevating the unseen principle within—in the nameless graces and elevating virtues of private and social life. Their power, if there be truth in history, or reliance may be placed on individual testimony, is sufficient materially to influence personal, and social, and even national character and happiness.

‘Oh deem not, mid this worldly strife,
An idle art the poet brings;
Let high Philosophy control,
And sages calm the stream of life;—
'Tis he refines its fountain springs,
The nobler passions of the soul.’

I shall not attempt to prescribe the methods, by which these subjects can be recommended to public attention; if the importance of the object be appreciated, the ways and means will certainly be devised. On this topic, I will add only one consideration more. If the study of the Greek and Roman classics is justly recommended to scholars, as the best preservative against a vitiated taste and style, then should the friends

of popular education neither forget, nor suffer to be forgotten, those chaste models of English prose literature, which come nearest to the tried standards of ancient genius. And, for even stronger reasons, should they endeavour to bring again into favor and fashion, the deep, rich, sententious strains of an earlier muse, the manly and labored productions of those great poets, who fortunately, perhaps, for their lasting fame, lived before our *gilded* age.

I come now to a brief enumeration of the advantages, which may reasonably be anticipated, from this new, but already wide-spread effort to diffuse useful intelligence. And here I am met by the fundamental objection of those, who believe that no advantage will result, but on the contrary, much evil; who think it wrong to dispel the ignorance of men, compelled to toil for a subsistence, and comprising by far the greater proportion of the whole community, lest you unsettle their views in regard to the relations of life, making them ambitious, discontented, and consequently less happy. Without adverting to other arguments, of which there is certainly no deficiency, I should be willing to test the validity of this objection by a simple appeal to facts. Will you compare two families in humble life,—the specimen may readily be found,—similarly situated in their outward circumstances, but differing widely in their mental condition? One of them is decently educated, and accustomed to habits of reading and reflection,—the other, grossly ignorant. Will you find the latter family more industrious, peaceful, happy, or virtuous, than their less illiterate neighbours? Compare, again, two countries, in one of which the blessings of education are secured to all by custom or law, while in the other they are the privilege only of a few. Or, contrast two different periods of the same country. In England, for instance, there are now probably a hundred respectably educated persons to every ten a century ago.

Now, can many doubt the result of such comparisons as these? If, however, that result, disappointing our expectations

and hopes, should prove, beyond a doubt, that the advantage is, and has been, on the side of ignorance, I see no alternative but to give up the point, and confess that we are upon the wrong track ; that the boasted march of mind and spread of knowledge, so far as man's best interests are concerned, are, after all, but retrograde movements. With our benevolent objector, who doubtless desires the greatest good of the greatest number, let us welcome back those good old times, when the bliss of ignorance was universal and undisturbed. Let us crush every effort to teach men, generally, any other duty than that of unconditional submission. Let the paper mills, the type foundries, and the printing houses be destroyed ; and, to complete the work, collect from every corner of the globe, those books, which, in uncounted millions, are now diffusing the miseries of intelligence, set fire to them, and let the light of their funeral pyre be the last which they shed on the world.

But a more numerous and more reasonable class, feel indifferent or hostile to the project, not because they disapprove of its object, but because they have doubts of its practicability, or fear its perversion. It must be allowed that there is room for such apprehensions. Like many other benevolent and promising schemes, this may prove one of ephemeral duration ; or like others, again, it may be wrested to injurious and unworthy purposes. But what is the natural inference from this concession, if it be not the obligation, vastly increased, of those, with whom, for the present, it rests to say, whether this institution shall either go down, or be abused ? Let the men of education, wealth, and leisure, in our land, catch but a tythe of the zeal, wisdom, and perseverance, which have won for Pestalozzi and Fellenberg, a fame pure as the snows, and durable as the granite of their own Alps, and this work *must* go on, it *will* succeed.

The characteristics and probable advantages of these associations, I cannot better express, than in the summary language

of one of our jurists.* 'They are recommended by their simplicity, by their economy, by their social bearings, by their practical tendencies, by their moral influences, by their accordance with our republican institutions, and by their tendency to excite and direct to worthy objects a noble spirit of inquiry. They appear to be adapted to all circumstances, to all times, and to all states of society among us. They recognise no place and no community among us, where intellect exists, in which it is not the duty and the privilege of its possessors to adopt measures by which intellect may be improved. To the parent as well as to the child, to the master as well as to the apprentice, to the man of gray hairs as well as to the sprightly youth, to him who earns his bread in the sweat of his face, as well as to him who fares sumptuously every day, they offer sources, facilities, motives, and inducements for social, intellectual, and moral exercises and enjoyments. If generally established, and faithfully conducted, they will shed abroad the dignity of science, while they carry the success of business into every farm-house and work-shop. They will convert the family, the social circle, and even the tea-table and fire-side, into schools of mutual improvement, and scenes of the purest and highest enjoyment.'

To these considerations, let me add, that Lyceums, if successful, promise to be effectual auxiliaries to the cause of youthful education, to that of temperance, and to morality generally. They may be welcomed as well adapted to remove, not only aristocratic, but vulgar prejudices. They can hardly fail to soften the asperities of political and religious parties. They have a direct tendency to elevate the tone of politics and legislation.

Viewing the institution as a component part of the great system of education, may it not become the solid wall of a well-proportioned fabric, of which infant schools are the deep and sure foundation? Or, to extend a figure which has already been applied, while *these* are Hercules in his rocking-shield,

crushing the serpents that have hitherto infested the cradle of infancy,—*that* is the hero in his manly strength, grasping the club that is to free society of its more formidable monsters.

Amid so many feverish excitements and factious struggles for honors and office, will not our countrymen more generally learn, that there is a nobler kind of power, with which every man may invest himself, and of which no man can be deprived. Let them remember that the power, which knowledge gives, is not only the best counterpoise to numerical and moneyed strength, but the best consolation for the loss of it. Instead of indulging in jealousy and discontent, while we witness the growing disproportion of different regions, and the encroaching dispositions of some stronger party,—let us endeavour to diffuse through the whole community, those treasures of the mind, which are better than commerce or manufactures, than canals or rail-roads, than political influence or golden gains. As members, neither of state, section, nor union, be it so much our ambition, to draw a bow of 'Ulyssean greatness,' as to be found with those, who are striving for the fairer palm of Ulyssean wisdom.

MR NEWMAN'S LECTURE.

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LECTURE VI.

ON

A PRACTICAL METHOD OF TEACHING RHETORIC.

BY SAMUEL P. NEWMAN,

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POLITY AND POLITICAL ECONOMY, IN BOWDOIN COLLEGE.

By the indulgence of your Committee I am permitted to offer you my views on a Practical Method of Teaching Rhetoric. These views, I will premise, are the result of some years' experience as an instructor, and of that reflection on the subject, to which I have been more particularly led, in an attempt to furnish an elementary treatise for the use of my pupils. It will be my endeavour to convey them to you in a manner as plain and didactic as within my power.

With the impression, that in proposing a subject to me your Committee had more particularly in view that part of the art which is called composition, and in this sense the word rhetoric is often used, I now proceed to point out a 'practical method of instruction' in this department of study.

And here it is necessary that I bring distinctly before your view the several advantages proposed to be attained by the study of rhetoric. This is important, since the most direct and sure way of obtaining these advantages, must be the best practical method of studying rhetoric. They are as follows ;—

1. Some acquaintance with the philosophy of rhetoric.

2. The cultivation of the taste, and, in connexion, the exercise of the imagination.

3. Skill in the use of language.

4. Skill in literary criticism.

5. The formation of a good style.

I shall, therefore, in discussing the proposed subject, direct your attention to these several particulars in succession.

What, then, is the best practical method of giving the student some acquaintance with the philosophy of rhetoric? This is our first inquiry.

By the philosophy of rhetoric, I here refer to those principles in the science of the philosophy of mind, and in the philosophy of language, on which are founded those conclusions and directions which are applicable to literary criticism, and to the formation of style. Obviously, then, it may be answered, that an acquaintance with the science of intellectual philosophy, and with the philosophy of language, should precede the study of rhetoric. Hence, no doubt, Milton and others assign to this branch of study the last place in a course of education. As before closing my lecture, I shall offer some remarks on the proper time of studying rhetoric, I here omit the discussion of this topic. It is known to all, that the prevalent opinion and practice are different from those recommended by Milton; so that our inquiry should be, what is the best practical method of acquainting the young with the philosophy of rhetoric—those whose minds are not accustomed to philosophical investigations, and who are ignorant of those sciences on which the art of rhetoric is founded.

I answer, that, while the attention should be directed to but few principles, and those most essential in a practical view, instruction should be imparted principally by familiar, talking lectures. A text-book, if one is used, should contain but a mere outline,—some general principles plainly stated and well illustrated.

Here I would more fully state, what I mean by familiar, talking lectures. Suppose I wish to make the student under-

stand what I mean by taste, and in so doing, I have occasion to speak of the judgment, sensibility, imagination, emotions of beauty and sublimity. Now, should I attempt to effect my purpose by a definition, or an extended technical explanation of these terms, there would be little reason to hope for success. I would rather refer him directly to the operations of his own mind, point out to him instances where he forms a judgment, where his sensibility is excited, his imagination called into exercise, and emotions of beauty and sublimity kindled up in his own soul. It is true, he may not, after this, be able to give me an exact definition of these faculties and intellectual operations, but he has learned what is meant by the proposed terms; and when I have occasion to use them afterwards, I have no fears of not being understood.

That instruction in this part of rhetoric is attended with difficulty, no one will deny. The subjects themselves are intricate; hard to be understood, and still harder to explain, especially to those whose minds are immature and unaccustomed to philosophical reasonings. Here, then, is room for much ingenuity in the instructor; and without a skilful effort on his part, the efforts of the pupil will be of little avail. Above all things, let not the mockery of set questions and set answers be practised, in teaching what pertains to the philosophy of rhetoric.

After all, it must be allowed, that with the most skilful instructor, and the best text-book, young students will obtain but imperfect ideas in what pertains to the philosophy of rhetoric. Still, what is thus imperfectly acquired, will be of importance to them as opening some interesting fields of thought, which, with strengthened powers, they may afterwards explore; and further, as aiding them in better understanding the nature of the rules and directions founded on these important and somewhat intricate principles.

I have stated as a second object to be attained by the study of rhetoric, the cultivation of a literary taste, and, in connexion, the exercise of the imagination.

My remarks on this head may be better understood, should I state concisely in what sense I use the phrase *literary taste*. I would define it, then, as the ability to judge of whatever attempts are made in literary productions to excite emotions of beauty and sublimity, founded on past experience. The man of cultivated literary taste, carries in his own mind a standard of taste, that conforms to the general standard of taste, which is but the agreeing voice of all ages and nations—the voice of nature. The decisions which he makes, are decisions not to be reversed; for they rest on unfailing, unchanging principles. He knows, too, in the highest and fullest sense, the pleasures of literature.

To aid them in the cultivation of literary taste, as thus explained; to make familiar to the mind the established, unvarying principles, found in this part of the constitution of things; to open to it these rich and high sources of enjoyment, is one important object of instruction in rhetoric, and our second inquiry relates to the best practical method in which this purpose can be effected.

The cultivation of a literary taste must evidently depend principally on a familiarity with those productions, which are esteemed models of excellence in literature. In this respect, there is a close analogy to the cultivation of taste in painting, or in any of the fine arts. We may also learn something on this subject, from the course pursued by painters in the improvement of their taste. They visit the most celebrated galleries, and seek for models of excellence in their art; and these they make the objects of close, long-continued and patient study. They inquire what there is to excite admiration in these paintings, and dwell on their different prominent beauties, and in this way cultivate and improve their tastes. Now it is in the same way that a literary taste is to be cultivated. And that the student may skilfully use his models of excellence in literature, and unite with his observation of them the application of those principles on which they depend, he needs the assistance of an instructor.

In stating the details of the course here recommended, I remark, that, by the aid of a text-book prepared with reference to the proposed method of instruction, the student may have brought to his view examples of those instances, where there is most frequent occasion for the exercise of literary taste. I here refer to what are termed the ornaments of style. In connexion with those examples, the nature of whatever in literary production comes under the cognizance of literary taste, may be explained. The different ornaments of style may be pointed out to his notice, and he may be led fully to see why attempts of this kind are in some instances successful, and in other instances fail.

When the examples thus cited, and the comments upon them, have become familiar to the student, let his attention next be directed to finding examples in English writers, which may exhibit similar ornaments of style, and in the examination of which, there is opportunity for the application of the same principles. Here it is that important aid may be rendered by the instructor, since, in conducting these inquiries and forming his decisions, the student needs both guidance and confirmation.

To make myself fully understood, I will here illustrate my remarks. Suppose that a student finds in his text-book the following comparison from the writings of Locke ;—

‘The minds of the aged are like the tombs to which they are approaching ; where, though the brass and the marble remain, yet the inscriptions are effaced by time, and the imagery has mouldered away.’

This comparison, he is told, is *naturally suggested* ; and in connexion with the example, the meaning of this phrase is fully explained to him. And not only is he made to see what is meant by a comparison’s being naturally suggested, but to feel, that, in the absence of this trait, the pleasure to be derived from it, as exciting an emotion of taste, would be impaired. Let the student now be directed to bring forward from any author, instances of comparison, which are in the same

manner naturally suggested ; and in this way let him become familiar with the principle stated, and with its application. In the same manner, by directing the attention in succession to the different traits in the various ornaments of style, and illustrating, in connexion with examples, the various principles on which these attempts to excite emotions of taste are founded, the pupil is led to a full acquaintance with this part of rhetoric. He is enabled at once, when reading the productions of any author, to perceive the beauties of style and to classify and arrange them ;—in other words, he acquires a good literary taste.

But there is another point, connected with this part of my subject, to which I will for a moment direct your attention. I refer to the exercise thus given to the imagination. In our courses of study, we have discipline for the memory, the reasoning powers in their various forms, and the invention. But no regard is paid to the exercise and improvement of the imagination. And this, not because this faculty of the mind is useless, or because it admits not of being strengthened and improved by exercise. The impression is, that there is no method which can be adopted for the attainment of this end. Now I would ask, if, by the course here recommended, the imagination will not be called into exercise, and strengthened ? These attempts to excite emotions of taste are addressed to the imagination, they are understood by the imagination ; and it is a just inference, that the plan of study I have now recommended, will furnish a salutary discipline to the imagination.

Of the favorable tendency of the method of instruction, I can, from my own experience as an instructor, speak with some confidence. I have ever found, that my pupils engage in this part of their rhetorical course with interest. They get new views of the nature of style, are led to notice their susceptibilities of emotions, of which before they have been unmindful. They also become conscious of their own powers of imagination, and learn something of the nature and offices of this faculty ; and with these views and this consciousness, they

find that a new source of pleasure is opened to them. Thus they both derive important aid in becoming writers themselves, and are prepared to read with increased interest the writings of others.

Before concluding my remarks on this head, let me say, that what is here recommended, is perfectly practicable. It is an employment, which any student with common powers of mind may pursue; and it requires, on the part of the instructor, only that degree of literary taste, which every one professing to teach rhetoric should possess.

I may be permitted, also, in this connexion, to speak of rhetoric as an appropriate branch of female education. It is well known, that the female mind is highly imaginative, and at the same time strongly susceptible of emotions of taste. There are then peculiar reasons, why the attention of those thus constituted, should be directed where the imagination may receive guidance and assistance in its flights, and the susceptibility of sublime and beautiful emotions be cherished and improved; in other words, where a good taste may be formed.

Should we look, too, to one prominent object of female education, we shall be led to the same result; for I may say, that, since in literature are opened new and rich sources of high enjoyment to the mind, whatever tends to the improvement of the taste, and to excite a relish for literary pleasures, must, at the same time, increase the ability of contributing to the enjoyments of the fireside and the social circle.

The third object proposed to be obtained by the study of rhetoric, is skill in the use of language. Here I refer both to the choice of words, so far as purity and propriety are concerned, and to the construction of sentences.

Instruction in this part of rhetoric should be conducted with reference to two points,—to acquaint the student with the nature and principles of verbal criticism, and further to lead him to beware of those faults in construction, to which he is most liable.

The former of these appertains to the philosophy of rhetoric, and is included under my first head ; but I here offer an additional remark. It was stated, when speaking of giving instruction on the philosophy of rhetoric, that difficulties attend this part of the course. These difficulties exist but in a slight degree, when exhibiting what is connected with the philosophy of language. Here is such abundant opportunity for illustration, and examples are so easily adduced, that every principle may without difficulty be made perfectly intelligible. Neither is this part of the study uninteresting to students. Curiosity is fully awake to whatever pertains to the nature of language, and to the rules that govern its use. And here I may be permitted to mention a work, which, in what pertains to this part of rhetoric, I regard as of the highest authority. I refer to Campbell's *Philosophy of Rhetoric*,—the ingenious, elaborate production of the Quintilian of English literature.

To lead the student to beware of those faults in construction which are of most common occurrence, the other object in view in this part of the course, must evidently be effected by adducing examples of these faults. From the nature of the case, the endless forms of correct construction cannot be stated. On the obvious principle, then, that where one has erred, another will be liable to leave the right way, we direct the attention to these wanderings, and connect with such instances the cautions they naturally suggest. The object here in view may be accomplished for the most part by the text-book. All that is incumbent on the instructor, is, to lead the pupil fully to see what in every example adduced the failure is, and how it is to be remedied. This part of a text-book does not require to be dwelt upon in the recitation room. It is rather a part to be referred to by the student, when, hesitating as to the construction of sentences, he needs guidance and assistance.

I mention in the fourth place, as an object to be obtained by the study of rhetoric, skill in literary criticism.

Under this head, I include whatever pertains more particularly to style, its nature and diversities, as seen in the wri-

tings of different individuals, and in different classes of literary productions. Our inquiry is, What can be done by the instructor most efficiently, to aid the pupil in acquiring skill in literary criticism, as thus explained?

Style has been happily defined by Buffon as 'the man himself.' If I wish to become acquainted with any individual, I seek an introduction to him; I endeavour to learn from personal observation the peculiar traits in his character. I may, indeed, from the description of a third person, receive some general and perhaps just impressions respecting this individual; but all this, though it might prepare the way for my better understanding his peculiarities when in his presence, would alone make me but imperfectly acquainted with him.

The same holds true, if I wish to become acquainted with the peculiarities of those of different nations. You might describe to me the national traits of the French, and of the Spanish; but a visit to those countries, and familiarity with their inhabitants, would be of far more avail in learning their national traits of character.

This illustration suggests the best practical method of giving instruction in what relates to literary criticism. A text-book, or an instructor, may describe with accuracy and fulness the peculiarities of style, as they are seen in the writings of different individuals, or found in different classes of literary productions. But this is not enough. That the student may clearly discern these characteristic traits, and understand their nature, and the causes on which they depend, his attention must be directed to these writings. He must in some good degree become familiar with them, and thus learn wherein they differ, and what there is in each to approve or condemn.

It may be thought, that to bring to the view of the student in this manner the peculiarities of different styles, may require too much time and labor. But, with the aid of a text-book, much of the work may be performed by the student himself. What is most necessary on the part of the instructor, is, to di-

rect the attention to specimens of different styles, and in some few instances to point out characteristic traits. The student, with this aid, will soon acquire sufficient knowledge and skill to apply the remarks found in the text-book himself.

This leads me to remark generally on the importance of reading good authors in connexion with rhetorical studies. This part of education is, I fear, in most of our schools and colleges, too much neglected. From his inability to judge of the merits of writers, the student needs guidance in selecting those which may be most useful to him, and this guidance the instructor should feel it is incumbent on him to supply. To read over occasionally with the pupil some choice specimens of style, may also be of essential advantage. To learn how to read, is no easy acquisition. Of course, I refer, not to the pronunciation of the words, or the inflections of the voice, but to the quick and true apprehension of the meaning, and a susceptibility to the beauties of style.

In this connexion, too, the student may be taught the true nature of literary criticism. It looks not for faults. It cherishes not a censorious, captious spirit. Its eye is directed after what is excellent and praiseworthy; after what may inform the mind, give grateful exercise to the imagination, and refinement to the taste. And when it discerns excellences of a high order, as if dazzled with what is bright and imposing, it sees not minute and unimportant defects. It is indeed nearly allied to that charity which is kind, and which, where she discovers what is truly worthy of her regard, throws her mantle of forgiveness over a multitude of sins.

I proceed now to notice the last mentioned advantage proposed to be obtained by the study of rhetoric. I refer to the formation of style.

This part of a rhetorical course of instruction is not particularly connected with the use of a text-book, further than that it furnishes opportunities for the application of principles and rules, which are there found. The aid furnished by an instructor, is principally in the correction of attempts in com-

position, with such general guidance and advice, as the intellectual habits and peculiarities of the individual may require. I offer, therefore, on this head, merely a few practical suggestions.

1. It is highly important, that the attention of the student, in his first attempts, should be directed to the management of his subject. I would require of him to exhibit a plan, or skeleton, stating the precise object he has in view, the divisions he proposes to make with reference to this point, and the manner in which he designs to enlarge on each head. In this way, he will not only be aided in forming habits of methodically arranging his thoughts, but will be led to adopt the easiest and most direct method of proceeding, in writing on any subject.

2. I have ever found, that, so far as the construction of sentences is concerned, and here I refer both to the division of a paragraph into sentences and to the phrases and forms of expression,—I remark, that, in relation to this part of the work of composition, I have ever found, that students derive important aid from translating select passages from the writings of good authors in other languages. Every one knows, that in this way a command of language is acquired. And I would extend the meaning of the phrase, so as to include, not only that *copia verborum*, and that power of nice discrimination in the use of words, which are generally understood to be implied by it, but also the right arrangement of words, and the correct construction of sentences. Other things being equal, he who, during the first six months in which the attention is directed to composition, should devote half of his efforts to the writing of translation, would, I doubt not, be in advance of him, all whose exertions had been employed in the work of composition.

3. I would further recommend a familiar mode of correcting the first attempts of the student. If practicable, the instructor may with advantage read over with the pupil his production, and alone with him freely comment upon its defects and ex-

cellences. While in this way needed encouragement is given, the attention of the student is directed to that point where there is most need of improvement. Besides, it not unfrequently happens, that the efforts of the student have taken some wrong direction. He has some erroneous impressions as to the nature of style, or as to the manner in which a good style may be formed. It may be that he is laboring too much on the choice and arrangement of his words, or the construction of his sentences; or, assigning undue importance to the ornaments of style, he may be seeking principally after what is figurative, and the elegances of expression; or, again, with false notions of what is original and forcible, he may be striving after what is sententious and striking. Sometimes, too, there exists a fastidiousness of taste, which is detrimental. The student is kept from doing anything, because he is unable to do better than he can do. In other instances, there is an injurious propensity to imitation. The student has fixed upon some writer as his model, and, servilely copying his master, his own native powers are neglected. Now in all these instances, the advice of the instructor may be of essential benefit.

One general remark, is all that I have to offer further on this head. It should ever be impressed on the student, that, in forming a style, he is to acquire a manner of writing, to some extent, peculiarly his own, and which is to be the index of his modes of thinking—the developement of his intellectual traits and feelings. It is the office of the instructor to facilitate the accomplishment of this important end, both by wisely directing the efforts of his pupil, and by removing every obstacle in his way.

I have now completed the remarks which I have to offer in connexion with the division of my subject. A few others, suggested by what has been brought forward, are all that I have to subjoin.

1. The impression, that the study of rhetoric is but of little practical advantage, which has to some extent prevailed, is an

erroneous impression. An acquaintance with the philosophy of rhetoric, the cultivation of the taste, the exercise of the imagination, skill in the use of language and in literary criticism, and the formation of a good style, are certainly important objects. It has also been shown, as I hope, that a skilful instructor, and a text-book adapted to the proposed method of instruction, may effect much in aiding the student to make these acquisitions.

That rhetoric, taught as it often is, does not prove of much practical advantage to the student, must indeed be allowed. And what can be expected from merely committing to memory a rhetorical catechism?

Hudibras' satirical couplet is too true, as the art is thus taught.

‘For all a rhetorician's rules
Teach nothing but to name his tools.’

The fact is, that the great secret of making the study of this art of practical advantage, is to direct the attention to examples and illustrations. Thus pursued, the study is of advantage. Otherwise, the prejudices which have existed on the subject, are but too well founded.

But there are other causes, to which the prejudices of which I here speak, are in part to be referred. Both those who have taught, and those who have studied this art, have not had in view, with sufficient distinctness, the different purposes which it aims to accomplish. The impression which generally prevails, is, that the only object of the study of rhetoric is the acquisition of a good style; and because this accomplishment is not immediately acquired, or does not unfailingly follow as a consequence from the study of rhetoric, it is thought a part of education of but little value.

In pointing out to you several advantages to be obtained by the study of rhetoric, I have, I trust, in part removed the impression on which this prejudice is founded. And I remark further, that while the formation of a good style, is one im-

portant object, which this study is designed to advance, the study of rhetoric alone will never effect this important result. Let the mind but be directed for a moment to what is meant by style, as already stated in this lecture, and it will be seen, that it is something depending on the intellectual habits and acquisitions generally,—a consummation of all that is effected by the discipline of the powers and the various attainments in knowledge. To expect, then, that the acquisition of a good style will necessarily follow from a course of rhetorical study, is to expect more than rhetoric professes to confer.

And in this connexion I remark that too much is wont to be expected generally from rhetorical studies. Quintilian professed to take the child *ab incunabulis*, and to train it up for the forum. But in the division of labor, which has obtained in more advanced states of society, the designs of rhetoric are far more limited. She does not profess to inspire genius, to strengthen the intellect, and store the mind with knowledge. It is her office, as has been already stated, to guide the efforts of the improved mind, to cherish its susceptibilities of pleasurable emotions, and to arrange and display its stores of knowledge.

Let, then, just impressions exist as to the nature and design of rhetorical studies, and the prejudices, of which I have spoken, will pass away.

Another erroneous impression which exists on this subject, is, that the rules of rhetoric are restraints on genius, fetters to confine and limit the free action of the soaring powers of the human intellect. He who regards them must be content to 'dwell in decencies forever,' and never can exhibit that originality and vigor of thought and expression, which are indications of a superior mind.

I would ask those who have such views, to consider, for a moment, the origin and design of these rules. So far as they are founded on conventional agreement, which is the case in respect to all rules which relate to the use of language, they must exist, and be observed, whether found in systems of rhe-

toric or not. They are restraints to genius no further than the use of imperfect means for the expression of the thoughts and conceptions of the mind, are restraints; and while man is compelled to use symbols for the conveyance of his thoughts, such restraints must exist.

Those rules which belong to literary taste, rest, it is true, on a different basis, but still on one which has solidity and fixedness. They are not, as they are sometimes supposed to be, the *a priori* decisions of men, who have assumed to themselves unauthorised power. Derived as they are from those writings, which, in different ages and nations, have been objects of admiration, they are in consonance with the general feelings of men—with what is found in the constitution of the human mind. The loftiest genius, untaught, may conform to them; it cannot with impunity transgress them.

It may be further added, that the restraints which leave room for the genius of an Irving and a Scott, will not keep down those who make the complaint we are considering, from rising to any height, to which it is safe for them to venture.

But if the prejudice we are considering, be without just foundation, it must still be allowed, that there is some ground for it, looking at our old systems of rhetoric. This art we know was cultivated with great assiduity, both in Greece and in Rome, and among the literary relics of those ancient times, are standard rhetorical works of high authority. Now it has been too far the case, that our modern systems have been based on these ancient standard works. What is required by a difference of language, and the different intellectual habits, and other peculiarities of communities so widely removed from each other, has not been kept sufficiently in view. As illustrations of this remark, I will just refer to the long chapter in some of our systems of rhetoric, on harmony of sentences,—a subject of importance in a transpositive language, but far otherwise, as requiring rules and directions for its attainment, in our own. I mention also the explanations and directions respecting the different parts of a discourse,—

the introduction, proposition, narration, confirmation, confutation, and peroration, all of which, with our modes of thinking and reasoning, are but of little value. And it is from directing the attention to these useless parts of rhetoric, that the prejudice we are considering has arisen. I readily grant, that such rules are restraints, and unnecessary, injurious restraints, on genius ; at the same time, I assert, that what remains, after these parts have been omitted, is highly important and useful.

Another prejudice, which rhetoric in company with her sister branches is called to encounter, is, that she has to do with mere words,—those words which we are told are the ‘daughters of earth, while things are the sons of heaven.’ This objection to the study of rhetoric, which, indeed, is not always, or most frequently, made by those who are most familiar with these sons of heaven, has influence on many minds. There is, in fact, a feeling of pride, which is nourished by its indulgence. To answer it, however, is easy. No one asserts, that mere words, however well chosen and marshalled, however harmonious and flowing, are objects worthy the attention of thinking, reflecting men. Neither is there, on the other hand, any question, that *thoughts* alone, however valuable, would be of but little use to the world at large, without that clearness and power of expression, which it is the province of rhetoric to furnish ; so that, continuing the illustration, we might ask, what would be the worth of these vaunted sons of heaven, without the daughters of earth to make them known, and adorn them ?

In concluding my remarks on this head, I would say, let rhetoric be taught in the manner recommended in this lecture ; let there be distinctly in the mind the several advantages proposed to be attained by this study, without too high raised expectations of immediate and necessary benefits ; let the nature of the rules and principles it inculcates be fully understood, and I have no fear that it will continue to be regarded as a study of little practical advantage.

Let me next, for a moment, direct your attention to the qualifications of a competent instructor in rhetoric.

1. He should possess some knowledge of intellectual philosophy. The art of rhetoric, like other arts, is founded on science of mind. It is from a knowledge of what is in man, of the constitution of the human mind, its susceptibilities of emotion, and the various influences it feels, that the skilful writer is enabled to address himself with success to his readers, and subject them to his power. And further, many of the rules of rhetoric, based as they are on principles unfolded in the science of mind, are but aids for the effecting of this purpose. How absolutely necessary, then, that he who attempts to explain and illustrate these rules, and to assist in cultivating the taste and forming the style, should possess some knowledge of that science whose principles are thus applied.

2. An instructor in rhetoric should possess some acquaintance with the most prominent writings in his native language. Familiarity with good writers will evidently prove highly serviceable in illustrating the rules and principles, which he has occasion to bring to the notice of his pupils. With this familiarity, also, will most probably be associated some skill in literary criticism, and some refinement of the taste, both of which are highly conducive to the success of an instructor.

I further add, what indeed is not confined to this branch of study, that he who attempts to instruct in rhetoric, should possess an aptness to teach. As we have seen, there are parts of the art which are difficult, hard to be understood, and requiring much explanation and illustration, on the part of the instructor. But on this head, I will not further enlarge, lest I seem unduly to magnify my office, and at the same time to condemn myself. Let it however be remembered, that not every one who has read a work on rhetoric, and who can ask questions out of a book, is fitted to instruct in this department of study.

Permit me next to offer one remark on the most suitable time for studying rhetoric.

There is some difficulty in determining the most suitable period for this branch of study. To comprehend in any good degree the philosophy of rhetoric, or to become skilful in literary criticism, requires maturity of mind. Hence, there seems a propriety in deferring the study till late in the course. Again, the student needs the aid which the study of this art affords, in the formation of his style, and its favorable influence on his literary taste; and these are reasons for placing rhetoric earlier in the course.

There are two ways in which this difficulty may be obviated. The attention may first be directed to some parts of rhetoric, particularly to what refers to the cultivation of the taste and to skill in the use of language, leaving to a later period what requires more maturity of mind. Another mode, and that which I am more disposed to recommend, is, to adopt a mean as to the time of studying rhetoric,—late enough to have the mind come to the work with a good degree of maturity, and early enough to derive benefit both to the taste and the style. I am more inclined to recommend the latter mode, because I do not approve of very early attempts in writing. I speak on this point from my own observation. Students in the college with which I am connected, begin to write themes the last term in the Sophomore year, having devoted their attention, during two preceding terms, to translations. At this time, a student has maturity of mind enough to 'look a subject into shape;' and till he can do this, my own opinion is, that he should not attempt to write. All the benefit to be derived from earlier attempts, relates to ease of expression, and this may better be acquired by translation. Those who attempt to write when very young, almost invariably acquire habits of desultory thinking. They learn to write without connexion or point, and thus all the ease of expression acquired, is dearly paid for. I much prefer, that a student should never have attempted the work of composition, than that he should have become desultory in his habits of thought. In the one case,

all that is required, is to form good habits ; in the other, bad habits are to be broken up, before right ones can be formed.

Before closing, I will advert to an objection, which has been sometimes urged against the method of instruction which has now been recommended. It is thought to be too difficult, to require too much effort.

To this objection I answer, that from the nature of this branch of knowledge, some difficulties must attend its pursuit. Who, without effort, can hope to look into the human breast, and to discern those hidden springs of action, those trembling chords of emotion, to which the eloquent writer must address himself? Who can expect to acquire skill in the use of language, and refinement of taste, without labor? Where is the able writer, who has not made himself such by his own unwearyed exertions?

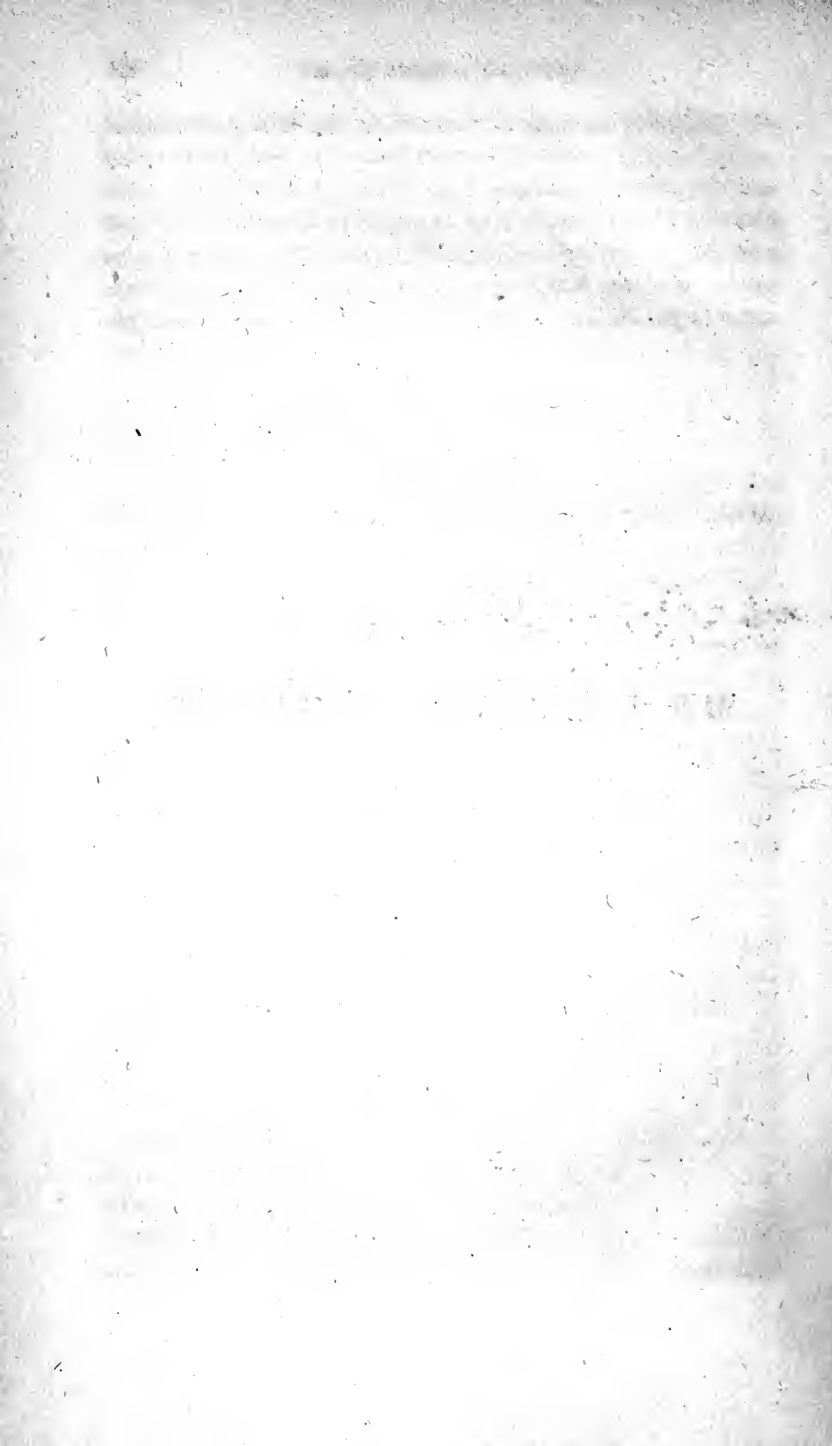
‘——Nil sine magno
Vita labore dedit mortalibus.’

But there is another view. It should be no objection to a course of study, that it requires effort, that it tasks the mind and calls for the vigorous exertion of its powers. For one, I confess myself in a measure skeptical as to the value of those improvements in education, which remove all difficulties out of the way, which, if they do not open a royal road to knowledge, make a smooth and a level one, and sometimes burden the traveller with help as he goes on his way. I am by no means persuaded, that these facilities are in the end to advance our scholars farther in their course. The higher you ascend the hill, the steeper and the rougher is the way; and it is only the strong muscle, and the sturdy step of him, who knows what it is to toil and to struggle, that can mount these steeps, and move onwards unimpeded by these roughnesses. I might here ask, what made our fathers what they were, and how comes it to pass, that there were giants in those days? But this topic belongs to others, and I dismiss it, with the ob-

jection which has led me to remark upon it, believing that the latter requires no further notice.

Gentlemen, if what I have now said has tended to increase the definiteness of your views as to the objects to be obtained by the study of rhetoric; and especially, if any suggestions have been offered, which may aid those who teach in becoming more useful to those who are taught this art, my design is accomplished.

MR GRUND'S LECTURE.



LECTURE VII.

ON

GEOMETRY AND ALGEBRA,

AS

ELEMENTARY BRANCHES OF EDUCATION.

BY F. J. GRUND.

SCIENCE and arts are useful, only in proportion as they contribute to our happiness, either by providing the means of our physical comfort, or by ennobling human nature and increasing the number and intensity of our intellectual enjoyments. Education is the appropriate means of securing these. I shall be justified, therefore, when, in speaking of the two principal branches of mathematical knowledge, algebra and geometry, I first dwell on the general purposes of education, in order to determine the rank which mathematical sciences ought to hold in early instruction, and the bearing which they have on the developement of intellect, and the formation of character.

Education has, at all times, held a distinguished place among the acknowledged interests of civilized nations. It has been successively the subject of thought and research with the most eminent philosophers of antiquity. Statesmen and reformers of empires have bestowed upon it their utmost cares, and

legislators secured and perpetuated its progress by laws. We have seen it keep pace with the political developement of nations ; here cramped, chilled, and oppressed, by tyranny and despotism, bearing all the marks and deformities of a gothic age ; whilst, on the other hand, we have seen it share and extend the blessings of liberal governments. But education is not only a national cause ; it is the cause of humanity, of mankind ;—the continuance and progress of civilization depend upon it. No one can be indifferent as to its advancement ; for there is none, who is not, at least indirectly, interested in its success.

The truth of these remarks has at no period been felt more strongly than in this ; at no time has the call for improvements in education been so general. The increased number of literary institutions in England, France, and Germany, the introduction of Sabbath schools, the number of periodicals, solely devoted to the purposes of education, the efforts of philanthropic societies in almost every part of the civilized world, the patient labors of Badesow, Resewitz, Campe, Salzmann, Olivier, Schulz, and Pestalozzi, bear ample testimony to this assertion. Yet there is no country, and perhaps no community, in which this demand for popular education is so loud, so unanimous, as in this ; because there is none, whose political welfare, nay, whose very existence, is so intimately connected with its progress. The system of free schools throughout this State, the institution of the Latin and High Schools in this city, the Mechanics' Institute, the Society for the Promotion of Useful Knowledge, finally, the formation of Lyceums in almost every part of the New-England States, are strong proofs of the vigilance of the people, as to moral and intellectual improvement.

Much, however, is yet left to be done, and great caution is to be used, lest the general call for popular and practical instruction, should defeat its very object.

In the minds of perhaps the majority of persons, education still consists in the acquiring of certain facilities for particular

purposes in life. But this does not deserve the name of education. A system of instruction adapted merely to *this purpose*, enslaves and degrades human nature. It reduces men to machines, by bringing up workmen for a manufactory. Let us, for a moment, consider the errors into which it leads.

The mind of the child is considered a mere receptacle, which is to be *stored* with knowledge. Its pliability is abused into a mechanical and spiritless routine. Neither the individuality nor the peculiar structure of his mind, not even his age, is taken into consideration. His mental faculties are not roused to action; the mind does not operate upon itself; for, in *receiving* knowledge, the pupil is merely passive. Principles are pronounced dogmatically, and are heaped upon each other without plan or system. Children the most unlike in capacity, are put together in the same class, and have to learn, each day, a fixed portion of one science or another; and the test of their acquirements is a verbal recitation from a book. The memory is charged with the crudest and most heterogeneous conceptions, without allowing the mind the least respite to assort and adjust them, much less the time which it needs to reflect upon them, in order to convert them into part of its own substance. Thus, from the first moment the boy goes to school, until the young man leaves college, he is harassed and haunted with the variety and unreasonable number of studies he is obliged to pursue, without spirit or inclination; and it is indeed a wonder if his mental powers are not in this way prostrated or destroyed.

A bounteous Providence seems to bestow the same parental care upon the preservation of intellect, which it does upon the continuance of certain species in the animal and vegetable kingdoms, where, notwithstanding the ravages of those who feed upon them, and the devastations committed by the fury of the elements, the prodigious number of seeds prevents the race from becoming extinct.

Many men can trace the developement of their minds to the time they left college, or the hot vapor baths of inferior in-

stitutions of learning. This is the period of the emancipation of their minds. They are now for the first time, perhaps, permitted to look round, and view calmly the immense territory of science, which lies as yet unexplored before them. They are now allowed to take their own standing, and to strike out a plan for their self-education. Many a happy thought that lay dormant, or was oppressed by the burthen of other studies, for which the student had neither taste nor talent, quickens now into life. One idea gives birth to another. They soon accumulate, and give the mind a tenor which lasts through life ; and it is not unfrequent to see men acquire more information from one year's self-discipline, than from all the instruction they had in schools. Men whose talents, while at school, were considered little above mediocrity, when circumstances call forth their energies, develope, sometimes, powers of mind, which confound those who are acquainted with them, and of which they themselves were unconscious, because they were degraded in their own estimation, and the mechanism of their education, leaving no room for individual efforts, gave them no stimulus to mental action.

Is, then, the object of education to leave to circumstances to raise the edifice of which the corner-stone ought to be laid in early childhood? How many adults can command the leisure which is necessary for a course of thorough self-discipline? Most young men, immediately after leaving school or college, emerge into active life ; their minds are engrossed with business ; their thoughts become rivetted on interest and gain, as the means of procuring to them physical comfort, the want of which is, in all countries, and at all times, felt more strongly than that of intellectual riches. Physical wants have an immediate bearing upon our own happiness, and impair that of those who depend upon us. They are therefore more pressing, and not so likely to be lost sight of, as the culture of our minds. Are we, then, to leave to *men* to atone for the faults of their early education? Is it to be left to the man of business to root out the excrescences and to correct the

misconceptions of his mind? In how many cases can mature age divest itself of prejudices imbibed in infancy? When does it entirely overcome the enslaving mechanism to which it has been accustomed in early life? Thus, in providing for a livelihood, the *mind* becomes crippled and deformed, and whilst, what is so natural to the human breast, men are greedy in the pursuit of pleasure, the greatest of all, the only lasting one, that of *intellectual enjoyment*, is irrecoverably lost to them.

These are the consequences of a mechanical, spiritless method of instruction, which, without elevating the mind, without exciting it to thought and reflection, leaves the noblest faculties of the soul uncultivated, whilst, by forcing the child into a premature activity of inferior powers, it impairs even its physical energies, and perverts and distorts human nature.

Great improvements have undoubtedly been made in education within the last twentyfive years, and among the happiest ones are those for which we are indebted to Pestalozzi. But his system remains yet to be fully understood and operated upon. The belief is yet too common among parents and teachers, that education consists in *receiving* certain principles and maxims, and in becoming conversant with such sciences, as it is supposed will be useful in after life. The term, *practical* education, has been misconstrued into the acquirement of such branches of learning only, as the pupil, when grown up, is likely to have an immediate call for; and by *useful* knowledge is meant that which can be *turned to some account*. This is undoubtedly the reason, why, in almost every branch of learning, authors have started up to condense and contract science, and to give, in a neat duodecimo, the researches and labors of ages. This is by some deemed a great advantage; but it is, in fact, a serious evil. Such treatises may be admirably adapted to men of business, who have neither the leisure nor the patience which is necessary to become proficient in science, and whose object it is, merely to get acquainted with a few principles, or, perhaps, a bare abstract of them, in order

to apply them to trade or to the mechanic arts; but, for the education of children, such books are totally unfit. Besides the general tendency which they have to make learners superficial, they are deficient in other respects. In treating of a science in a cursory manner, it is impossible to preserve that gradual transition from one principle to another, which constitutes the chief merit of all elementary instruction.

In addition to these remarks it may be observed that most authors attempt to make their works as complete as possible. Nothing essential, therefore, is omitted in them. They contain as many propositions and rules as the most complete treatises on the same sciences, and the natural consequence is, that such works become crowded, and instead of smoothing the road to knowledge, they merely bring the obstacles nearer together. Such books may be very useful to men, who, after having gone through a regular course of studies, wish to have a book of reference for those principles which are of immediate application in practice. But a cursory *treatise* on a science is not a proper *introduction* to it. An introduction to any kind of knowledge, is to prepare the mind for the reception of either more complicated or more abstract truths, by making it familiar with the plainest and simplest ones. A great deal depends on awakening a taste for learning, and on treating it in such a way as not to harass or fatigue the mind. If the subject is *completed*, the work is no longer an introduction; it takes the place of a full treatise, which is put into the hands of the pupil, instead of a more extended and thorough work. Thus, instead of *removing* difficulties, their *number* only is decreased, by diminishing the quantity of knowledge which is imparted.

In early education it does not matter how *far* the child goes in a particular science; but merely how *understandingly* it goes to work—how far the acquaintance with new principles contributes to draw out its mind. The '*method*' of instruction is vastly more important than the number of things and principles the child becomes acquainted with. It is, in this respect, with the sciences, as it is with the fine arts. A pupil

profits more by drawing a few well selected copies from eminent masters, than by copying a thousand indifferent pieces.

The method of instruction must be such as to enable the pupil to acquire knowledge and facility by his own individual exertion; for 'nothing is ours but what we acquire ourselves.' Less depends on the shortness of the way, than on its security. Neither is the mass of knowledge so important as the manner in which it is acquired, in order to render the pupil morally healthful and self-dependent. This is the spirit of Pestalozzi's method, whose principle it is to start, in education, from the most elementary points of all human knowledge, to generate the germ of it in the child's own mind, and to strengthen and mature it, by regular, systematic activity. Not the reading, writing, ciphering, drawing, &c, but the exercising and developing of the child's powers, through the medium of these, ought, according to his idea, to be the principal object of all elementary instruction. Pestalozzi's method evidently aims at making the child independent of its teacher, by bringing it to think and act from principles to which it became sensible by the force of its own application. This intellectual education is analagous to the physical developement of the child. It is consequently more negative and preventive, than positive or dogmatical. Like a watchful nurse, he would prevent the child from falling, and yet give it full scope for the exercise of its own strength, by trying to walk by itself. This is the only rational influence which the teacher ought to exercise over his pupils. Education consists only in the natural influence of adults on children, in order to develop their mental and physical faculties to such a degree as to enable them to advance toward perfection of their own accord.

Having thus spoken of the purposes of education in general, let us turn our attention to the importance of mathematical studies in early instruction, and the influence they have on mind and character.

'Mathematics,' in the words of an English reviewer, 'are a high and important branch of study. They are a science-

closely concerned in the investigation of abstract truth, requiring intensity of attention, accuracy of research, acuteness of application, and severity of judgment.

'They are intimately connected with the most useful arts, and with the sublimest speculations, with those inventions which give man power over the world in which he is placed, and with those discoveries which elevate him to the knowledge of contemplating the worlds beyond and around him.'

But neither the sublimity of mathematics, nor their utility in almost every stage of life, is the principal reason for which they ought to be made a regular branch of study in common schools. It is because there is no other science so admirably calculated to draw out the thinking faculties of children, and therefore none which forwards so effectually the purposes of elementary instruction. It is on this account, Pestalozzi, and all modern reformers of education, have devoted so much of their attention to arithmetic and geometry. These two studies, when pursued in the proper manner, go hand in hand, and form the very ground-work of an intellectual education. They are almost the only branches taught at schools, which call upon the pupil's judgment, prompt his mind to thought and reflection, and teach him to reason from given things to things unknown. They lead the pupil to institute comparisons, and to determine the relations which things bear to each other. Thus exercising every faculty of his mind, he acquires a habit of close attention, and strengthens and confirms his mental energies by concentrating them, and bringing all to bear upon the same point. With this regard it may be said, that mathematics facilitate every other study. The mind which is once to a certain degree developed, and which has acquired the habit of thinking and reasoning, can easily apply the same powers to other branches of knowledge. Whatever study the pupil may now undertake, is entered upon more systematically. He is now accustomed to investigate for himself. He has not the same dependence on authority, for in his previous study none has been assumed; nor does he lay so

much stress on the conceptions of others, until they are made his own by a fair appeal to his understanding.

But if the study of mathematics is really to produce these happy effects, it must be commenced early. Not that I mean, that children ought to be made mathematicians. This would be absurd. I admit that there are certain theorems and propositions, both in geometry and algebra, which require great power of combination and abstraction, and a skill in analyzing, such as children cannot be supposed to possess. I will go still farther, I will say that there are certain branches of the pure mathematics, which puzzle even the minds of adults; and there are others, which it seems are almost inaccessible to ordinary capacities. But among these are certainly neither the elements of geometry nor algebra, which are by far the most useful branches, whilst some of those which I have alluded to, are but of little application either in practical life, or even in the natural sciences. They are the province of the amateur and the scholar, and enter rarely even the sacred halls of a college.

It is the peculiar property of geometry to be adapted to every gradation of capacity. Children from six to ten years of age, may be as much benefited by mathematical instruction, as people advanced in life,—only the *method* of instruction, the style and arrangement of the text-books, and, above all, the object which the teacher has in view in communicating knowledge, must vary according to the age and capacity of the pupils.

In instructing pupils of a mature age, due attention must be paid to the mechanism of the science, as the means of acquiring facility of calculation. In teaching children, this consideration must entirely vanish, when compared with the object of forwarding the general purposes of education. Mechanism in all early instruction is fatal, even when a proper explanation has gone before. For whilst the mind is abandoning itself to the security of the road, it remains inactive, and is likely to relapse; but when it is once, to a certain degree, develop-

ed, nothing is to be apprehended from a moderate share of mechanical operations. They are then indispensable; they afford the mind a sort of intellectual *recess*; and while the pupil is still at work, he may gather strength for renewed mental exertion.

I have said that the study of mathematics ought to be commenced early. By this I mean that the mathematical method should be acquired in childhood. Besides the reasons which I have already alleged in favor of this principle, there are others no less important and deserving of consideration. It is with the faculties of the mind as it is with those of the body. If you would see a man in full possession of his physical energies, having a perfect command over his limbs and muscles, you must let him begin to exercise them at an early period, lest they should become obtuse and inflexible. The same is the case with the mind. The habit of attention, the power of abstraction, and of bringing the mind for a length of time to bear upon the same subject, and, above all, that strength which will sustain intellectual labor without fatigue, must be acquired early, or they will never be our own. Genius may break through, and strike out its own way, but the greater part will remain far behind mediocrity.

It might be objected, that the mind may be cultivated by other studies, not less important than mathematics. To this I would answer that most studies pursued in schools are more or less matter of memory. Spelling, geography, grammar and even history, as taught to boys, require little reflection or individual effort. Independently of this consideration, it may be observed, that there are certain branches of mathematical knowledge, which are requisite for the common purposes of life. These boys are obliged to render themselves familiar with, during the short period in which they are at school, and if they do not begin when young, so as to have the time to acquire them in a rational manner, they abandon themselves to a mechanical routine, and consider mathematics as witchcraft or a talisman, by which they may obtain the answer to

certain questions, by proceeding according to rules. Instances of this kind we see every day, though, in exoneration of the teacher it must be said, that it is impossible to impart a competent knowledge of any science, in the short time which they are allowed to devote to it.

The question has frequently been asked, Of what use is the study of algebra and geometry to those who do not wish to make a profession of it? The answer is contained in what I have said of their influence on the developement and growth of the mind. I would add only that it is the peculiar characteristic of the mathematical sciences to adapt themselves to all conditions, and to be useful, whatever the extent to which they may be carried. An acquaintance with only a few principles in other sciences is rarely beneficial, and may often prove a serious injury. In mathematics, the smallest number of principles is complete in itself, and affords satisfaction. It is not the reading of a tale of which you judge by the end; it is like the study of history, every page of which is crowded with useful instruction, in which the philosopher perceives a wise connexion, which enables him from the statistics of the day to foretell the history of future ages.

So far I have been speaking of the positive advantages of the study of mathematics; but it is not less to be recommended as a preventive against frivolous reading and a premature developement of the imagination. It gives the mind a solid cast, and a depth of reflection, which does not suffer it to delight in the easy and dangerous plays of fancy. The love of truth and investigation will lead it into the vast domains of the natural sciences, and strengthen and elevate it, by the principles of a sound philosophy.

Before entering on the method of teaching algebra and geometry, I deem it necessary to speak of the prevailing system of instruction, in which the study of algebra takes the precedence of geometry. This must be considered an inversion of the natural order in which the different branches of mathematics ought to follow each other.

Geometry is of all mathematical knowledge the easiest of comprehension ; it being the least abstract, and the most capable of being represented to the mind through the medium of the senses. It is in this respect even easier than arithmetic, and there is no reason, why it should not be made as common a branch of education, and be taught as early as spelling or grammar. I certainly do not mean to put Euclid or Legendre into the hands of children ; but that the first principles of geometry are really capable of being presented in a manner which shall render them a proper study even for children in primary schools, has been happily illustrated by Pestalozzi and many of his pupils.

Lacroix, in his essay on instruction, speaks of mathematics, as that kind of knowledge, which is founded on the smallest number of conceptions, but *upon* those which are oftenest repeated ; which lead to the idea of number and space. These ideas enter the mind at so early a period, that none can recollect when and how they are acquired ; and such is their similitude, that there is no reason for beginning the education of the child with the consequences of the one sooner than with those of the other. But the applications of the numerical calculus being more frequent, the habit of beginning with the science of numbers or arithmetic, has prevailed.

The same argument cannot be offered with regard to algebra, for though it is a study of unbounded utility, including, in the widest sense of the word, the whole cycle of mathematical sciences ; and though by means of its symbols it is capable of representing the elements of all speculative knowledge, yet, with regard to the common purposes of life, and particularly the mechanic arts, it is less useful than geometry. An acquaintance with this science is indispensable to the draftsman, the architect, the mason, the carpenter, and to most practical men, whilst the study of algebra holds out stronger inducements to the analyzer and the adept in science.

The same inference may be drawn from the history of ma-

thematics. Geometry was cultivated before any other branch of the exact sciences. We can trace it back to the cradle of civilization, to India and Egypt; arithmetic and algebra are comparatively a *modern* invention. The former was but little known among the Greeks, and the latter was not cultivated until the sixteenth century. The six books of Diophantes,* which have come down to us, contain but indefinite problems. Besides, he adopted no scientific method of representing quantities; and from that period till 1494, no author on that science is known. The writings of the Arabians Ben-Musa and Thebit-Ben Corah, in the ninth century, exist only in manuscript, and are scattered in the Bodleian and other libraries of England, and in that of the Escorial in Spain. Great efforts were made in the sixteenth century by men like Luccas Pacciolo, Michel Stiefel, Scipio Ferreo, Tartaglia, Cardanus and Bombelli; but the known quantities were yet represented by numbers, and the unknown ones by signs. It was reserved for Francis Vieta to introduce the first scientific notation, and to represent known and unknown quantities by letters. One of the most useful parts of algebra, the invention of Logarithms, is but of the seventeenth century; for in Stifelius' *Arithmetica Integra*, geometric and arithmetic series are merely compared without any interpolation; and it is only since Newton and Leibnitz that algebra has been brought into a regular system. Thus the most perfect treatise on geometry, Euclid's *Elements*, preceded the regular study of algebra nearly twentythree centuries.

No plausible reason can be assigned for this astonishing difference, except that geometrical truth is in its very nature more simple and therefore easier perceived. It does not require the same intensity of speculation as algebra; it needs no symbols to represent to the mind its object; for this is plainly set before us, and we are in many cases prompted to ask, why does

* These six books were found in the 6th century, in the library of the Vatican, in Rome.

this need a demonstration? and it is because geometry is more intimately connected with practical life; the call for it is more general, its object is everywhere,—here, and in the spheres beyond us.

In almost every case where algebra is studied before geometry, it is not carried beyond the solution of a quadratic or the developement of a surd. There the pupil is obliged to stop, and begin geometry. But no sooner does he venture himself upon trigonometry, than he perceives he has not sufficient facility of algebraic calculation. He is now put into a new and more extended treatise on algebra, and has to spend another year, before he is able to complete the elements of a college course. But these checks weary his patience, diminish his zeal for the study, and discourage his hope of success. How much better would it be, to begin geometry as soon as the first principles of arithmetic are properly understood. The mind would then acquire sufficient strength to digest at once a full treatise on algebra. Its march would be more secure, and its progress less interrupted by changes of study.

Let us imitate the example of the best writers on geometry, all of whom exclude algebraic reasoning from the body of their works, in order to render them an introduction to a course of mathematical studies. The analytic method may be that of invention; but it is not the way to teach, particularly younger pupils. All education is necessarily synthetic. Its principles are to be adapted to the state of the mind, and cannot wholly be deduced from a general view of the sciences.

I am now to speak of the method of *teaching* algebra and geometry. This flows naturally from the science itself, and from the object which both teacher and pupil have in view. For this purpose, we would in the first place recommend to every instructor, first to make himself perfectly familiar with the knowledge he is to communicate, before he enters upon the duties of his profession. This may be called a bare truism; it is nevertheless a *truth* which cannot be too often repeated. The great and rapid advancements, which have late-

ly been made in the common system of instruction, enable every man, no matter of what qualification, to teach, not only one, but all branches of education ; like a village physician, who is accustomed to be summoned to cases of all descriptions, and treats a fever with the same ease as he applies a blister, extracts a tooth, or amputates a limb.

Our text-books have lately arrived at such perfection as to render explanations and lectures from the instructor altogether superfluous, if he is only a *disciplinarian*, and watches over the *good behaviour* of his pupils. From the head-quarters of his school-room he then directs the different evolutions of their minds, and sees that they go through their exercises with punctuality and precision ; or, he acts the part of an overseer, whilst the slaves are doomed to search for the diamonds from amid the dust, and, after washing and cleansing them, deliver them up at a recitation. These are carefully collected and treasured up, and at the end of the year they are neatly set, and not without a good deal of foil, *exhibited*, for the double purpose of inviting purchasers, and stimulating others to similar exertions.

As long as such a system exists, mathematics may as well be entirely struck out from the course of studies pursued in schools. If the mind is not to be *benefited*, why should it be *fatigued* and *mal-treated*. Perhaps it will some time or other take up this study of its own accord, perhaps make proficiency in it by its own power and activity, if we do not stifle and disgust it, at the outset, with the very name of mathematical truth, by the spiritless manner in which it is presented.

It is an idle assertion that mathematics are dry and unpalatable. Whatever is perfectly understood, never excites disrelish. Why is it that, in the schools taught after the plan of Pestalozzi, mathematics are a favorite study with the young ? It is because the pupils understand what they are learning ; they are not hurried into new propositions before they are perfectly familiar with the preceding ones ; their minds are opened by gentle degrees ; the road to knowledge is rendered

smooth and the ascent gradual, to make the journey both easy and pleasant.

In this manner, the first principles of geometry ought to be taught. Nothing must be advanced in a positive manner. The mind of the *pupil* is to be the principal operator; it must instruct, convince, and confute *itself*; and when it arrives at some important truth or result, it must be through its own powers. It ought not even to perceive that it has been guided thither.

While in class, the pupils ought to be at the most perfect ease; they ought to be permitted to ask explanations, whenever they have not been able fully to comprehend the instructor; and he ought to encourage their curiosity by the most familiar treatment that is compatible with his own dignity; for in proportion as a science is supposed to be difficult, the manner of teaching it ought to be engaging and cheerful.

To captivate the attention of the pupils, inductive interrogation is advisable; because it is the most natural way of teaching, and best adapted to the faculties of the young. Thus, queries may be substituted instead of rigid propositions; for what is lost by them in brevity and precision, is gained in easiness and familiarity of style.

One plan of teaching geometry, which may be suggested as useful, is the following. Teach not more than *one* proposition or query in a day. This the pupils can bring themselves to understand with ease, and without neglecting their other studies. But let it be explained in as many different ways as possible, in order to suit their different capacities. The pupils should then draw the figure on their slates, or on the board, and be directed to vary and change it, for the sake of studying the relative position of its different parts, and to enter more fully upon the spirit of the query. At the end of each lesson one or two questions may be proposed for the pupils to think and reflect upon until the next day. This will excite their curiosity, make the study more interesting, and stimulate them to individual efforts. The pupils ought not to commit

any proposition or query to memory, in order to recite it by rote; they ought to understand its *meaning*, and be obliged to give it in their *own* words. The same course is to be pursued with regard to demonstrations and problems. If the teacher uses a book, he should not be satisfied with the explanations contained in it. The best book on any science needs much aid from the instructor. The latter ought to illustrate the different principles of the science he is to teach, by familiar conversation, with his pupils; for if all his instruction is a mere paraphrase of the book, how can he interest them, or command their attention?

Instruction given in this way will occupy more time; but it will be more agreeable to the pupils, and insure more effectually success in teaching. The progress of the learner will be slow, but every step of it will be well secured; their minds will never be satiated, but by that means they will feel a constant desire to learn more; they will not, at the age of fifteen or sixteen, think themselves mathematicians; but the road to improvement will be left open to them, and they will feel that they need improvement; they will not wait until necessity calls forth their energies,—they will advance of their own accord, and scorn the assistance of others.

It would lead me too far to enter, here, upon the different parts of geometry, and the order in which they are to follow each other, in a regular course of instruction. Most authors are, in this respect, at variance with each other, and it is for the instructor to decide, which system agrees best with his plan of teaching. I would only point out two errors committed even by the best writers on mathematics. I mean the attempt to prove rigidly the theory of parallel lines, and the measure of the circle. The former is deemed impossible by the best geometers. The theory of parallel lines has baffled the efforts of the most eminent mathematicians, and will probably forever remain imperfect, on account of the imperfect definition of a straight line. Even Lagrange followed the example of Euclid by taking for granted, that through one

point only *one* line can be drawn parallel to another. Why then torment the pupils with useless attempts to prove what is self-evident? The same remark applies to the definition of a circle as a polygon of an infinite number of sides. Definitions do not rid us of difficulties which are inherent in the substance of things. Making a curve line consist of an infinite number of points, does not make it differ from the possible definition of a straight line; and we have as yet no exact ratio between the diameter and the circumference of a circle. But it is at once plain and evident to every mind, that by continuing to inscribe regular polygons of double the number of sides, the perimeters of these polygons will finally *approximate* to the circumference; the rigorous form of reasoning can, in this case, only vitiate the mind, by presenting an exceptionable principle, as perfectly satisfactory.

What I have said of the method of teaching *geometry*, applies in a great measure also to *algebra*. I will therefore confine myself to a few remarks.

It is a common practice among many instructors, to let their pupils go through a treatise on algebra, without proposing to them any additional problems, either to exercise their skill in analyzing, or to give them facility of calculation. A similar course is pursued even in colleges, and the consequence is, that most students, when venturing themselves upon the calculus or even on an inferior branch of analysis, meet with insurmountable obstacles. Problems, which lead to simple equations of the first and second degrees, are found in many elementary works on algebra; but those which involve more intricate analytical processes are hardly ever met with in *text-books*. With justice have English mathematicians charged French writers with abundance of theory and want of examples; but it is not less true that the greater portion of English authors contain principally examples, and hardly any theory, which is equally to be deprecated. Those authors, says Lacroix, in his essay on instruction, have neglected to give the *spirit* of the mathematical method; the pupils may learn from them

the *mechanism* of the algebraic calculus, but they will not comprehend its philosophy, without which algebra is nothing but a trade, destitute of all interest to men of thought and reflection.

But there is a way of uniting both the English and the French method, by taking the text of a French writer,—for instance, that of Lacroix, which is generally used in American colleges,—and supplying the want of examples with the aid of books written solely for that purpose. The algebraic problems of Bland and Meier Hirsch are admirably calculated for younger students. Those of Meier Hirsch have been lately translated into English, and may be considered superior to Bland's, on account of the vast number of analytic processes they contain. Among these, the problems on the radical calculus, afford the best means of initiating the learner into finite analysis.*

For the purpose of studying analytic geometry, the works of Biot and Boucharlat may be used. The former treats his subject more in the abstract. Boucharlat, in his theory of curves, adheres more strictly to the geometric method, and abounds with useful and interesting problems. He was a pupil of Lagrange, and his works are dedicated to, and met with the approbation of his illustrious teacher.

When the student has acquired the necessary facility of algebraic calculation, and is sufficiently acquainted with analytic geometry, then, and no sooner, ought he to undertake the study of the differential calculus. Lacroix, Boucharlat and Tobias Meyer are the most comprehensive authors on this branch of the pure mathematics; and an intimate acquaintance with either of them, will enable the student to read the gigantic works of La Place, as presented to us in the invaluable translation of Dr Bowditch. The notes of the translator, which occupy nearly as much space as the body of the work itself,

* A new translation of these problems, adapted to the use of the American student, is now in press, and will soon be published by Carter, Hendee and Babcock, Boston.

offer far greater facilities to the American student, than the original does to the French. Whilst a much longer course of preparatory studies, and years of application are necessary, to read single chapters of the *Mécanique Céleste*, all difficulties seem to be removed, and the road levelled everywhere by the indefatigable labors of the American translator.

But it is not for me, in this lecture, to point out the road, which the scholar must take to become a *proficient* in science : my object has been to show how the study of mathematics may be made easy and agreeable to *beginners*. If the hints which I have now thrown out should in any degree contribute to promote the study of a science which has hitherto been too much neglected, I shall be amply rewarded for the pains I may have taken to present them in this form.

MR OLIVER'S LECTURE.

THE END OF THE WORLD

LECTURE VIII.

ON

THE ADVANTAGES AND DEFECTS

OF THE

MONITORIAL SYSTEM;

WITH SOME SUGGESTIONS, SHOWING IN WHAT PARTICULARS IT MAY
BE SAFELY ADOPTED INTO OUR SCHOOLS.

BY HENRY K. OLIVER,

OF SALEM, MASS.

‘Δος πρὸς στῶ καὶ τὴν γῆν καθίσω.’

‘GIVE me a place whereon I may stand, and I will raise the world,’ said the mighty prince of ancient mathematicians, as the great truths of mechanical science flashed across his mind. In later days, and from a land where learning once held imperial sway, though now, over her widely extended plains, ignorance and barbarism are brooding in deepest intellectual midnight, there has been heard a voice, bearing to us, my friends, who are actively engaged in the great business of education, and to all, who feel a proper interest in its promotion, sounds of the deepest import. ‘Give me a handful of pupils to-day, and I will give you as many teachers to-morrow, as you want.’ This was a saying very frequently used by the celebrated Dr Bell, the well-known founder of the Madras, or Monitorial System of Instruction. The verification of an assertion like this, would evince in him, who should so make it good, the possession of even greater power than Archimedes

would have displayed, had he found a place whence he might have shaken the world from her deep and strongly laid foundations. For he, who should, with such rapidity, create the means whereby to accomplish so noble an end, would possess himself of a host of intellectual levers, (if I may be allowed the use of such an expression,) which should exert an influence to move the world, which not all the strivings of folly and of prejudice, would be able to withstand. The cry that 'the schoolmaster is abroad,' would have been uttered long before it fell from the lips of Brougham, and the wide plains which the siroc blast of ignorance had scorched and withered into a wilderness and a desert place, would have blossomed like the rose, and been strewn with the rich and life-giving fruits of the tree of heaven-born science. But unfortunately for so fair a speculation and 'a consummation so devoutly to be wished,' we fear that the inefficiency of the means and the feebleness of the levers, will render many of the efforts to move the world of ignorance almost, if not entirely, futile.

It has fallen to my lot, my respected friends, to address you, upon 'the advantages and defects of the monitorial system of instruction,' and to endeavour to show how far it may be safely adopted into our schools.

I shall take up the subject in the order here laid down, and shall give you the results of my own observation and study, referring you neither to individuals nor to books, for corroboration of any assertions which may be made. I am induced to take this course, because I have thought, that when a subject like the present is proposed, in the particular manner which the phraseology of ours seems to indicate, it is as frequently expected, that the writer should advance his own opinions, as that he should collate and publish those of other people. There is this advantage attendant upon the former course of procedure, that the opinions advanced will be received as the opinions of a single individual, and so far only, entitled to consideration. While, if the latter be pursued, the

magic of great names, and of high-sounding authorities, may be apt to exert a controlling influence, and sometimes even an illimitable sway over many minds, and to compel them to yield that assent, and, perhaps, that entire submission, which they would never concede to individual assertion. The latter course may restrain, and even effectually check, our own freedom of opinion, while the former leaves it to act unbound and unembarrassed. Permit me to importune your candid hearing and judgment, and allow me to express my regrets that the subject has not fallen to the disposal of abler and more experienced hands.

The advantages which the monitorial system of instruction possesses over the ordinary method, are the following :—

1. It provides, by the same means, and within the same amount of time, for the tuition of a far greater number of pupils.

2. In consequence of such a provision, there results a very considerable economy of time.

3. In a school, where this system is adopted, every individual is kept in constant employment.

4. A fourth advantage, and one resulting from the preceding, is, that by this method, the disrelish and irksomeness on the part of scholars to school employments, are lessened in no inconsiderable measure.

5. The monitorial system of instruction removes from the teacher much of the wearisome tediousness consequent upon long-continued efforts in teaching the ordinary and more mechanical branches of learning, and enables him to introduce his pupils, or at least some portion of them, to more advanced and important studies, than he would be able to do if his attention and services were constantly required for the instruction of each individual pupil.

These five points, it is believed, are the principal ones, upon which the advocates for the system of mutual instruction found their claims for the preference. Some of them are of the greatest importance, and are fairly entitled to the highest consideration.

We shall proceed to speak of each of them more particularly.

1. The monitorial system, by the same means, and within the same amount of time, provides for the tuition of a far greater number of pupils, than are taught by the ordinary method.

It has been found that by the use of monitors, or assistant teachers in miniature, one principal instructor may conduct the studies of two hundred and fifty, or three hundred boys, thus performing the duties of at least five teachers. In many places, particularly in crowded cities and in extensive manufacturing districts, such an advantage is of incalculable importance. The amount of time usually allotted to children in such situations, for obtaining some acquaintance with the simpler elements of knowledge, is extremely limited, and this small portion ought to be most constantly occupied and sedulously improved. In such cases, the system under consideration, as it affords the means of obtaining the greater amount of instruction in the smaller portion of time, though that instruction is from the nature of the case quite superficial, possesses unquestionable claims for the preference. This application of the system, and this alone, it is believed, was that contemplated by the originator or originators of it. At any rate, it is certainly the case, that it was originally applied to the children of the lower classes in crowded cities, for the laudable purpose of affording them, what they had never before been blessed with, some small portion of instruction; which instruction, from the peculiar exigency of the case, was necessarily imparted with a prudent economy both of time and of money. Where but little instruction, therefore, can be communicated, and that little, sparing as it is, must be given in an extremely limited portion of time, we know of no better method of procedure, than that of adopting the system under consideration.

2. The method of mutual instruction insures no inconsiderable economy of time.

In a school of one hundred and fifty members, taught by

the customary method, the actual amount of time during which each scholar is entitled to the personal attention of his teacher, is precisely two minutes and two-fifths. Were there two instructors, he would be entitled to the double of this portion. Now let us suppose the school to be conducted on the monitorial system, and that there is employed one instructor, who has under him two divisions of monitors, each consisting of twenty persons. We will suppose the instructor to be constantly occupied with these two divisions in alternate order, and that the division not under immediate instruction is employed in the tuition of subdivisions of pupils. The twenty individuals around the teacher will receive, in the course of the customary six hours of daily school time, eighteen minutes of personal instruction, and the members of the subdivisions under the care of monitors will receive, (being reduced in numbers, by the deduction of the monitors, to one hundred and ten,) sixtyfive minutes and a half of monitorial teaching, equivalent perhaps, in point of value, to the eighteen minutes of teaching given by the presiding monitor, the master, to his division. On this supposition, which will show, fairly enough, the usual routine of a monitorial school, each scholar receives nine times as much instruction as he would do in an ordinary case. Nor are the monitors, when actually employed in teaching, losing or wasting time; for we are undoubtedly all well aware, that there is no better method of learning and securing the knowledge of any particular branch of study, than, after acquiring some little acquaintance with it, to be diligently engaged in teaching it. So that it has been rightly said, that the best way to learn is to teach. It is a most lamentable fact, that in all our common schools, there is (not because of any fault of the teacher, but from the very defects of the common school system), a most profuse and shameful waste of time. This lavishness of the best and most precious of Heaven's gifts, and doubly precious to the growing mind, exists mostly in that part of the scholars who are at their desks apart from the teacher, and who ought to be employed in preparing an assigned exercise for recitation. Yet they, from that unfortunate peculiarity of human nature which

tempts us to prefer ease to labor, suffer themselves to be employed only so long, as will suffice for the preparation of, in most instances, a defective and miserable recitation. There they sit, as even the most unobserving spectator of our ordinary schools cannot but notice, wasting the priceless energies of mind and of body, and acquiring habits of inattention and of idleness, the most miserable influence of which, not the lapse of years, nor the utmost labor of maturer days, can ever wholly eradicate. To so unfortunate a profuseness of time, we contend that any employment, even the most unsatisfactory, is preferable. Let it not be said that we require too much of the young, that we would keep them too constantly employed, that we would unwisely strain their youthful powers in the accomplishment of impossibilities. The time apportioned to school exercises is sparing enough; and the residue of the day, and the frequent recurrence of vacations and of holidays, give them the most ample opportunities for relaxation. But it may be said,—‘*Arcum nec semper tendit Apollo.*’ True. But he never unbent it when in the fury of the chase. He never relaxed the keenness of his aim, till the prey was prostrate at his feet.

3. A third advantage is, that, in a school where this system is adopted, every individual is kept in constant employment.

No one, as we have already observed, who is even but partially acquainted with the state of our schools under the ordinary management, can avoid observing, how very great a portion of the customary school hours is wasted in absolute idleness. Let us suppose an instance of a teacher having the supervision and instruction of a school of forty members, who are divided into four classes. These four classes, we will suppose, are to recite in regular rotation, commencing with the lowest. While this class is employed with the teacher, the other three classes are, or ought to be, engaged in the preparation of a lesson. Now it is usually the case, that the lessons assigned to lads, do not, or, from their fault, will not, occupy them more than three quarters of an hour, or at the most, an entire hour. The class reciting will, perhaps, occupy about

the same amount of time ; and when the teacher shall have finished with them, there are the three other classes, each and all, prepared to recite at the same time. Now but a single one can be attended to, and the other two must and do sit absolutely unoccupied. Nay, so far as the discipline of the school, and their own benefit is concerned, they are worse than idle, since they will be sure to resort to some mischievous expedients to kill the monster Time, till their turn for recitation comes round. But where the monitorial system, or something equivalent or better, is adopted, no such difficulties can occur, because, as it in truth ought always to be the case, recitation occupies more of school time, than study. We have supposed what we believe to be a favorable instance, in the selection of a school of forty members. And if so much time be there worse than wasted, what shall we say of one which contains from one hundred and fifty, to two hundred scholars ? These last numbers give the usual amount committed to the charge of a single teacher in all our large towns ; and we hazard nothing in making the assertion, that of this large number, one half are unemployed, so far as the acquisition of knowledge is concerned, more than one half of their time. Nay, even in the very best regulated schools, where but a single master is employed in the instruction of any considerable number of pupils, and without any assistance from them, this evil exists in a most alarming measure.

We conceive this difficulty to be the grand and most discouraging obstacle to the advancement of our common schools. We believe that they will never awake from the sluggishness under which so many of them lie buried, until this palsying incubus, which broods over and withers their best energies, be shaken from them. We believe that they will never take and maintain that rank, which their numberless friends most earnestly desire them to do, until the constant employment of every individual, and the unsparing occupation of every moment of time, be universally prevalent. In our opinion, this feature of the monitorial system is above all praise ; and the sooner it is found

to exist, in some shape or other, in every school in the country, the sooner will their best interests be promoted. What teacher is there among us all, who has not felt a glow of satisfaction and even of delight, when, on surveying his little kingdom, he has found every individual sedulously and profitably and constantly employed? Who is there among us all, who does not esteem such moments among the very proudest of his professional career?

There is another point gained by the use of monitors, which we mention here, because connected with the subject of frequent recitation. There can scarcely be found a parent, who is not only willing, but even desirous, that his children should have some employment connected with school-exercises, out of the ordinary limits of school-hours. This is particularly the case in the winter season, when the days are short, and school-time is contracted into the narrow bounds of five hours, and the evenings are of protracted length; and, on the part of children, mostly unoccupied. Lessons prepared out of school can, where the monitorial system is adopted, be recited as soon as school commences, and can *all* be recited and simultaneously, and the whole work may be accomplished in less than an hour. But where the old method prevails, the more lessons there are learned, the worse it is for the learner, so far as recitation, which is the very life-blood and soul of school-time, is concerned.

4. The fourth advantage which we would mention, although they all seem to be so intimately connected, that they might be easily enumerated under a single division, is, that the influence of this constant employment fairly and effectually removes the disrelish and irksomeness on the part of scholars and of teachers, attendant upon the ordinary method of instruction.

We all know that when we are constantly and busily employed, time flies as upon noiseless and unheeded wings. There is no instructor from whom the fleeting hours do not pass away too rapidly; and many a one is there, if his school be

exclusively conducted on the ordinary system, who has many a time found that his narrow portion of time is all elapsed, and his work is but half done. How readily and how heartily might such an one exclaim, were his dactyls handy,

Hei mihi! nunc quid agam? nimium celeri pede fugit

Hora——

Now by this constant employment, which is a characteristic feature of the system of mutual instruction, the same effects are produced in the removal of fatigue and irksomeness from the bodies and minds of scholars. And it is from them that we should be particularly anxious to remove every feeling and every impression that may be, in the least degree, unfavorable to the employments of the school-room. Make that a spot to which they will delight to resort; make it, in deed and in truth, a '*ludus literarius*,' and you will remove the chief obstacles in the way of your success as an instructor.

5. The fifth and last point which we shall mention, in which the monitorial system has an advantage, is, that it exempts the teacher from much of the wearisome tediousness consequent upon long-continued efforts in teaching the ordinary and more mechanical branches of learning, and enables him to introduce his pupils, or, at least, some portion of them, to more advanced and important studies, than he would be able to do, if his attention and services were constantly needed for the instruction of each individual scholar.

The zealous and the ambitious instructor, the man who is in love with the profession, for of such a man alone can success be predicated, will never rest satisfied that his school is as good as his neighbour's; that he teaches well, and that his pupils learn well, certain assigned, and therefore expected, branches of study; or, in other words, that it does not move in a retrograde direction, or that it is merely stationary.

Περὶ τῆς Θεμιστοκλέους λέγεται, ὡς καθευδῆν αὐτὸν οὐκ ἔαη τὰς Μιλτιάδους τροπαιοῖς. * * 'Of Themistocles it is said, that the trophies of Miltiades would not let him sleep.' Now, will it not be

the case with the ambitious in every vocation—will it not be the case with the ambitious teacher, that the laurels of his brethren of the same calling will excite in his bosom, not the evil canker-worm of envy, but a generous, an open, a manly spirit of emulation, whose well-disciplined efforts shall benefit himself, his profession, and the world? Will not his motto be 'Onward, and onward still?' Will he not be unwilling to move, all his life long, in one unvarying beaten track, to perform forever a stale, and, to himself, a profitless round of tedious duties, destitute alike of interest and of novelty? We believe that he will. We believe that the history of his school will be distinguished by those periods of time, at which some farther progress has been made in an assigned course of study, or some new department of learning has been introduced. Now, how can so desirable an end be so effectually accomplished, as when he can avail himself of the services of a great number of assistants? To accomplish it thoroughly and satisfactorily, his assistants ought, indeed, to be adult teachers, and of sufficient acquirements and experience. But since, in ordinary cases, the possession of such adult teachers is next to an impossibility, let him make the nearest practicable approximation he can to the benefits which their aid would secure, by making use of such helps as a selection from his best scholars will afford him; or, in other words, by adopting some feature of the method of mutual instruction.

We do not mean that the progress of his school, to which we have alluded, shall be made at the sacrifice of thorough instruction, or that his school shall *appear* merely to have got over a greater than ordinary amount of study; though, as we shall hereafter show, we apprehend these to be the rocks upon which every monitorial school, in the strict meaning of the name, will eventually be wrecked. But it is very evident, that by the employment of a greater number of teachers, a greater amount of time is called into service, and, of course, a greater amount of labor performed. The best and surest way, however, to attain to the proper perform

ance of this labor, is to employ, as we have already hinted, a greater number of adult and experienced teachers than is done in ordinary cases. But if this cannot be done (and that it cannot, will always be true, so long as the public are opposed to the disbursement of a larger amount than is paid, at the present moment, for the instruction of public schools, and teachers are found who are willing to work at the public's prices), if this cannot be done, we say, let the teacher make use of the best means and the best assistance within his reach ; that is, let him train up the most intelligent, and the farthest advanced portion of his pupils to the business of teaching.

We have now done with the consideration of the advantages resulting from the system of mutual instruction. We have stated them, we believe, fairly and candidly, and have stated all, which are entitled to much praise. We now proceed to show its defects. These we shall endeavour to lay down in the order of their relative magnitude.

We object to the monitorial system,

1. Because no school can be conducted upon it, separably from great noise and confusion.

2. Because it is next to an impossibility to procure monitors, who will prove, in every particular, faithful and adequate to the duties expected of them.

3. Because, in a school conducted upon this system, the principal instructor cannot be sufficiently well acquainted with the particular merits and failings of each individual pupil.

4. Because we believe its legitimate tendency is to make anything but thorough scholars, and to introduce into all, excepting the more mechanical parts of knowledge, a degree of superficialness and inaccuracy highly prejudicial to the best interests of sound learning.

Of these we proceed to speak, also, more at large.

1. And in the first place, we object to the monitorial system,

because we believe no school can be conducted upon it, separably from noise and confusion.

No one who has ever visited a monitorial school, can be otherwise than aware, that this objection is founded upon what is strictly true. From the very nature of the case, noise and confusion, and those of no ordinary palpability, are absolutely inherent in the system. They were born with it, and have 'grown with its growth, and have strengthened with its strength.' In all monitorial schools, a very large portion of the scholars, and sometimes all of them, are called into simultaneous recitation. This cannot occasion anything else, than a confused uproar of exclamation, and a motley medley of vociferations. From the immediate contiguity in which many, and, in fact, we may say all, the reciting classes are placed, and from the circumstance, that usually all of them are performing their exercises within the limits of a single room, it cannot but follow, that one set of reciters should continually interrupt and confuse those in their immediate proximity, particularly if they are reciting a different lesson. And so far as the interest of the learner is concerned, it is, in some particular cases, even worse, if the adjacent divisions are reciting the same lesson. For then, if there happen to be a dull scholar in No. 1, he has only to listen to and repeat the words of his comrade in the neighbouring No. 2, who has been blessed with a better head, and has acquired closer habits of application than himself. To this doffing the dunce and donning the wise one, to this literary smuggling, we have more than once been the amused witness. Again, if one half of the members of the school are reciting, and the other half are endeavouring to study, how can it be, that the noise and din of the reciters should have any other effect than to render the attempts of those who are required to be employed in study, really and truly nothing but attempts, and those attempts the most abortive and futile? Who can apply himself undistractedly to study, with confusion and noise echoing around his head? What scholar can comprehend the meaning of a dif-

ficult passage in a classic writer, or investigate successfully a complicated and slippery formula in the mathematics, when one half of the little world of his fellow pupils are vociferating their lessons at the very top of their vocal powers? *Aurora musis amica*, and not more so from her freshness and beauty, than from the calming influence, and soothing nature of her noiseless hours.

2. Our second objection to this system is, that it is next to an impossibility to procure Monitors, who will prove, in every particular, faithful and adequate to the duties expected of them.

To instruct in any given branch of knowledge, thoroughly and successfully, requires something more than even the greatest familiarity with the particular text book which may have been adopted for that branch. If this were not the case, there would be no necessity that the individual, whose design it may have become, to qualify himself for the business of instruction, should go into an extensive and laborious course of reading and of study. He would be necessitated, merely, to drill himself to perfection in a certain set of books, and to have at convenient readiness a certain set of questions appended and chained down to a certain set of answers, and he would be armed and equipped for the pedagogical warfare. Now we maintain that this will not answer. We maintain that every teacher, to perform his duties faithfully and successfully, should be a person of studious habits, of extensive reading, and of very considerable acquisitions in every branch of learning, which has any relation to the particular course of study, adopted for the school into which it may be his fortune to be thrown. We do not mean that a man to teach arithmetic successfully should be extensively learned in the Latin and the Greek languages; or that he, whose province it may be, to teach history or geography, should be profoundly versed in mathematical learning. But, in the former case, he will be far more likely to be successful, and certainly he will perform his labors with more satisfac-

tion to himself, if he possess a good knowledge of the ordinary branches of the mathematics; and in the latter case, it is indispensable that he be familiar with the general history of the world, and even more than familiar with the particular history of individual countries. Now, that a mere child, or a mere school-boy (for they are the monitors), should possess this knowledge, is by no means to be expected; and that they should perform the duties of teaching these branches of study, with a desired success, is as little to be expected. We are willing, indeed to make some exception, with regard to teaching, or rather superintending, the performance of the merely mechanical parts of arithmetical or other science. But in the other instance adduced, we cannot see how any exception can be made. How many subjects, but cursorily or darkly hinted at in our little compends of history, can the well-informed teacher fully and satisfactorily elucidate! How much interest can he call forth from his youthful auditory, by entering at large into the narration of some important and interesting subject, which the limited nature of the text-book has allowed to be but incidentally mentioned! How much light will a good knowledge of mathematics enable him to throw upon many of the rules and investigations of common arithmetic! For there are, as we all know, very many problems given for solution in our ordinary arithmetical treatises, which can only be demonstrated and understood, by a reference to some principles of algebra or of geometry. Now, can we expect all these elucidations, desirable as they are, from the mouth of a common monitor to his fellow pupils? Most assuredly not. For so far as monitorial recitation goes, it is solely and purely mechanical, and altogether restricted to the prescribed text book, or to an answer printed down in the books, and numbered to accord with a certain question. We know that the difficulty is still greater in those schools in which instruction in the ancient and modern languages is given by monitors. To make a young person familiar with the principles and the pronunciation of a language, even of his own, requires a long

continued and persevering course of instruction. Of the Greek, Latin and French languages, this is particularly true. To pronounce either of the former correctly, requires a perfect familiarity with the quantity of every word in the language, and this familiarity is not acquired in one, two, or even three years. Of the difficulties in acquiring a correct pronunciation of the latter, we are all aware, and we are all as well aware of the great difficulty of acquiring the language from any other mouth than from that of a native teacher. How then can a common school monitor impart satisfactory instruction in these two instances? We have been witnesses to the vain attempt. We have heard reiterated errors in the pronunciation of both the former languages pass entirely unheeded and uncorrected by the presiding monitor. We will not distract your ears by repeating what these errors were. Let it suffice, merely to say, that they were terrific enough to make the bones of Porson rattle beneath the incumbent ground, and to frighten the manes of Bentley into annihilation. We do not think that any blame can, in the instance to which we allude, attach itself to the monitor himself. For his sin was the sin of ignorance. He was but little better informed upon the subject than the individuals over whose recitation he was presiding. He had, indeed, received instruction in advance of his division, and instruction of a very good quality; but it is useless to expect faultlessness and a perfect readiness in every particular, on the part of persons of so little experience as lads at school must necessarily possess. It may be said that the head-master himself was injudicious in his selection. In reply to this, we would say, that we believe that the best selection was made, which the nature of the case permitted. The fault was neither in the teacher nor in the monitor, but was then, and is now, absolutely inherent in the system itself. For that system directs us to place reliance upon those resources from which it is perfectly impossible that good and sufficient support should be obtained. Years of study, and the most extensive reading, and the most perfect familiarity with any language, ancient or

modern, are, in our opinion, necessary, nay, indispensable, if a man would teach it thoroughly and satisfactorily.

3. Our third objection is founded upon a belief that in a school conducted upon the monitorial system, the principal instructor cannot be sufficiently well acquainted with the particular merits and failings of each individual pupil.

This acquaintance we esteem to be of the very highest importance. He is not at home in his school-room, nor does he know the materials with which he is to labor, who is not perfectly familiar with the disposition, talents, and acquirements, of every individual in it. He must be unable to designate the good and the bad, the industrious and the indolent, the gentle and the stubborn, the incorrigible and the yielding. He cannot praise and promote the one, and judiciously punish or degrade the other, because he does not sufficiently know them. The power to understand and to discriminate should be in the teacher almost an innate capacity. He who is destitute of this capacity, or who neglects to cultivate and to improve it to the highest degree of excellence, is culpable in the extreme. And it is equally unfortunate for him, if the peculiar constitution and organization of his establishment put the means of acquiring this knowledge beyond his reach. Now that this is the case in monitorial schools, we are fully persuaded. The great distance at which many of the pupils, not under the immediate supervision and instruction of the principal teacher, are necessarily kept, from the circumstance of their being disciplined and taught by the intervention of others, renders it impossible that the case should be otherwise.

4. Our fourth and final objection to this system is, that we believe its legitimate tendency is to make anything but thorough scholars, and to introduce into all, excepting the more mechanical departments of knowledge, a degree of superficialness and of inaccuracy highly prejudicial to the best interests of sound learning.

Were there no other objection to be brought against the monitorial system, as a whole,—let me be distinctly under-

stood, this alone would possess power enough to overthrow almost every argument which could be adduced in its favor. It is not our object here to enter into any disquisition upon the importance of a deep and thorough knowledge of whatever branch of learning we undertake to become acquainted with. The praises of sound learning have often and even recently been uttered in your ears, and we will not repeat the thrice-told, though still delightful tale. In your own bosoms, if there live there, as we most sincerely hope there does, that richly merited veneration for profound and unyielding investigation, to whatever department of learning it may be directed, in your own bosoms, these praises must have found a responsive voice.

‘Drink deep, or taste not the Piërian spring,’ is a line of peerless merit, and fraught with the wisest counsel ; counsel of more than ordinary value in these degenerated days of surface and of skimming, the prevailing genius of which is, we fear, becoming more and more averse to that uncompromising toil and patient labor, which can alone fast bind the bays and the laurels around the scholar’s brow. We hold it to be self-evident, that no man is fairly entitled to the meed of sound classical scholarship, unless he be deeply versed in the grammatical principles of ancient language, unless he be extensively acquainted with the splendid productions of ancient learning, and unless he be almost a worshipper of every letter in every name which beautifies the long list of the genius and intellect of classic days. Nor would we award to him the merit of mathematical skill, who is not as familiar with every department of that heaven-born science, as with the sounds of his native tongue. We expect not to find, in every age and in every land, the immortal names of a Porson and a Bentley, of a La Place and a Bowditch. No, the world has not worth enough to be blessed with them, and science hardly a depth beyond the reach of their researches. But when such giant intellects are found, let no diminution be made from their just praises. Let us not forget them, and fall into the miserable

fashion of the day, of heaping indiscriminate laudings upon a mushroom growth of what are called profound scholars, yet whose claims and whose very appellation will prove as ephemeral as their own existence. Now, we ask, is it the influence of the system under consideration, to bring forward scholars like those whose names we have adduced? Is it the influence of this system to foster, to encourage, or even to awaken their love for science, their unsatisfying thirst for the deepest waters of the fountains of learning? We believe it is not. We believe that it is directly the reverse. Is it to be expected, is it reasonable to hope, we do not say from the nature of *things*, but from the nature and habits of young people, that they will exert themselves to the utmost point of the requisite diligence and investigation, to possess themselves perfectly of a certain prescribed portion, suppose of some classic author, if they are assured in their own minds, that this portion will not be required of them, and strictly required, by one, whose knowledge in the matter is infinitely superior to their own, and whose authority to require it is commensurate with his knowledge? If studying the writings of the prince of epic poets, will they sedulously investigate the multiplied and endless changes in the form of his words? Will they, with critical acumen, learn thoroughly to distinguish the interminable variety of his dialects? Will they make themselves competent to point out the Attic and the Doric, or even the more common Ionic forms? We believe they will not. We believe they will reason (as even many older individuals would do, except when spurred on by some more than ordinary incitement), that they need not fret themselves, and labor, and toil, and *dig*, as they call it, to obtain all this familiarity with their author, because they are sure that he, to whose share it will fall to examine them, knows but little, if any, more about the matter, than they themselves do. Is not such reasoning perfectly consonant with the principles of human nature? Do we not see its operations in the every day business of our schools and of our lives? Here, then, is the great peril. Here then, in our belief, is the

grand difficulty and defect in the whole system of monitorial instruction. It will make deficient, defective and superficial scholars, an evil most sincerely to be deprecated, as the canker-worm and destruction of all sound learning. Will all the strivings, will all the counsel, will even the very utmost authority of the principal teacher, prevent entirely so ruinous a result? We fear not. So great is the waywardness, so chainless and powerful the aversion to studious efforts in many, if not in most young people, that all his labor and his counsel will pass by them 'like the idle wind.' We are sensible that all scholars are not equally opposed to application. We are sensible that there are many, of whose very nature, labor and sedulous application seem to be a constituent part; many who would labor and learn in the very worst school the imagination of man ever conceived of.

'Some trees will thrive, in spite of arid soil;
Some hold their stately form, 'midst raging tempest's toil.'

But not so of all. And even for the security and stability of the good principles and firmly fixed habits of the most diligent scholars, we should have some fears, amidst the general recklessness and indolence which surround them.

We come now, at length, to the consideration of the last topic alluded to in the heading of our remarks, which is, 'to show how far the system of Mutual Instruction may be safely adopted into our schools.' We confess that we should prefer leaving the entire subject here, after having stated the advantages and defects of the system, permitting each one to form an opinion for himself. It is a point to be dealt with, with the extremest wariness and prudence. That the prevailing system of school management has defects, and those, too, of the most palpable and mischievous nature, is an assertion as incontrovertible as truth itself. And it is equally undeniable, that an entire, thorough and radical change, of some kind or another is loudly demanded. If the monitorial system will cure these defects, without introducing others equally glaring

and mischievous, if it will place our schools upon the long and ardently desired footing of preeminence and of excellence, the sooner it is universally introduced, the better. But, as we have seen, this system, as well as the ordinary one, has certain essential and inherent defects. As we have seen, also, it possesses some very eminent points of excellence. This being the case, it would seem as though the voice of prudence would direct us to separate the chaff from the wheat; to adopt what is good, so far as the nature of our school system will permit, while at the same time we retain whatever meritorious in the old, and to reject whatever is bad and therefore mischievous, from them both. *In medio tutissimus ibis*, is a motto of the soundest prudence, and as applicable to the case in discussion as to the numerous others, to which it has been so frequently applied. The course, then, which we believe might be followed with entire safety, and even with absolute benefit, would be to adopt into all our schools, those points in the monitorial system, which, possessing themselves universally acknowledged excellence, have, at the same time, the desired power of effectually remedying several of the greatest defects in our common system. That we may be more precisely understood, we proceed to be more particular. We have already stated in the former part of these remarks, that there is a very great portion of time, in a school conducted upon the ordinary method, which is spent in the most unprofitable idleness. We have observed, also, that this failing was not consequent upon any fault of the teacher (for the faithful teacher is constantly employed), but because of the utter impossibility of his giving his attention to more than one set of scholars at a time. Now, in cases like this, and where the number of scholars is greater than can be kept in unremitted occupation by the solitary teacher, let him make use of what is infinitely preferable to a wasteful lavishness of time, the monitorial system. Let him select some prominent individuals from a superior class, and appoint them to superintend some useful exercises to be carried forward simultaneously by a whole class. These exercises should be such, how-

ever, as have been previously explained and taught by the presiding master, and of the correct conclusion of which there cannot a doubt arise. Let them be, perhaps, in arithmetic, in algebra, in written translations from Latin or Greek into English, or from English into Latin or Greek, when the monitors can have the assistance of printed keys. We have practised upon this method with great advantage both to pupils and to monitors. As the particular course pursued has sometimes been thought worthy of a passing inquiry, we will, by your permission, enter into an explanation.

Let there be provided a set of black-boards, of such a number as the convenience of the school-room and the necessities of the school may require, each board being about forty inches by thirty. Let them be arranged in a convenient part of the room, at about three feet apart, standing contiguous to the wall, and at right angles with it, and parallel to each other. We have always made use of twentyfour. This number may be enlarged or diminished, to conform to the number of pupils who may be required to use them. When the pupils are stationed at them, each has a separate board, the size and position of which, together with the vigilance of the teacher or monitor, prevent his seeing the work upon the board next before him. To every three boards there is appointed a monitor of supervision, who is selected from among the best scholars in the class. Over the whole, there is placed a presiding monitor, who is always selected from the highest class in school, and who, consequently, has been over the whole course of instruction over which he is directed to preside.* At these boards, are performed numerous exercises in translations; all exercises in arithmetic and algebra; all those in the practical parts of geometry and trigonometry; and many in the demonstrative parts of the latter sciences; each pupil being required to draw the figure, and to write out the demon-

* Whenever the occupations of the teacher of the school will permit, let him be the presiding monitor. He will find this method of teaching and reciting, particularly in the mathematics, the best that can be devised.

stration. It is to be understood, also, that all these exercises are performed by the pupils, entirely without the aid of their text-books, excepting in very extraordinary cases. They are, of course, never allowed to use them, nor even to carry them from their seats to the boards, when about to recite demonstrations in geometry and trigonometry. In long and complicated questions in arithmetic and algebra, they are sometimes favored with them. But in ordinary cases, the presiding monitor alone holds the book, and announces the question for solution. Each scholar then takes the data, as he hears them given out, and afterwards completes the operation. The monitors of supervision, also, are required to perform all questions, upon slates held in their hands, and to exhibit them to the presiding monitor. They afterwards inspect the work of the three individuals, committed to their charge, and report, if right or wrong, to the presiding monitor. It is the chief excellence of this application of the monitorial system, and this particular manner of using the black-board, that each and every question, is performed by each and every scholar. And the circumstance of his being unprovided with a book, from which to copy his formulas, or to obtain his rules, and the fact that he cannot possibly get assistance from any other one than himself, render it certain that he must become, in some greater or less degree, familiar with the subjects to which his attention is directed.

There are very many useful purposes to which a set of black-boards like these, may be applied, all of which the circumstances of the school and the matured judgment of the experienced teacher will point out to him. He may also, with advantage to his pupils, adopt the monitorial system in cases of reviewing a lesson which has been already recited to himself in geography, spelling, and in the more simple and mechanical parts of knowledge, as has been already remarked.

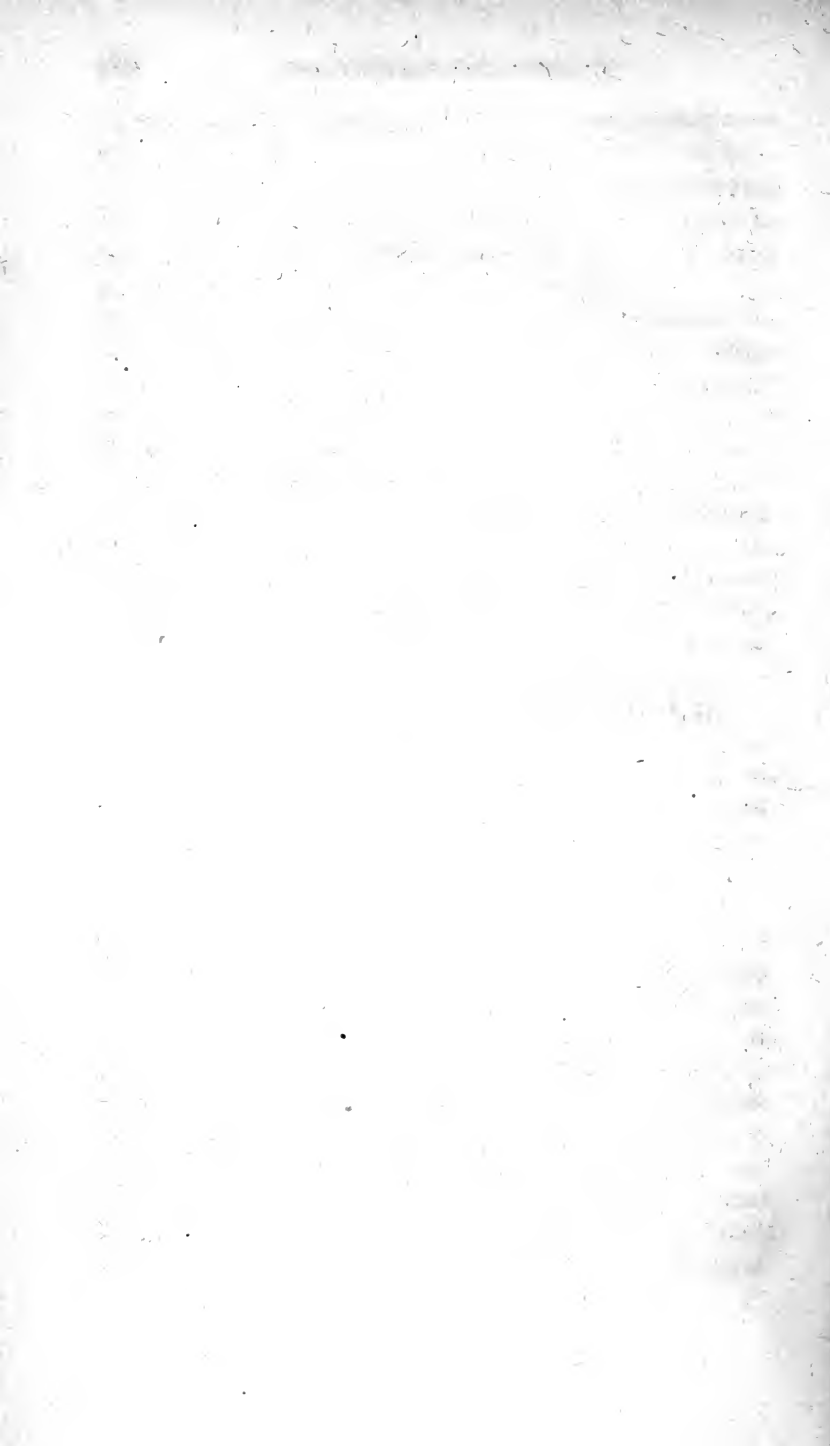
But we do not feel willing to say to any, 'Adopt the system of mutual instruction in full, since it is the very best that has been ever devised.' For we should then be saying what we cannot bring ourselves to believe. What then is the course,

or the system, which as a whole may be safely and advantageously introduced into our schools? We will briefly explain our views on this subject, and then bring our remarks to a close. In the first place, we believe that the most beneficial course which can be followed, is, that the number of scholars in our public schools should be lessened, or that the number of teachers should be increased. Of the two alternatives we should prefer the latter, and have come to the belief that a method somewhat similar to that recently adopted for the management of the Boston public schools, would prove satisfactory and beneficial. That is to say, in the regular organization of a school we would give as assistants to the principal teacher, one, or two, or more adults, and as many younger assistants as the exigences of the school would require. These latter should be persons who had been regularly *through the whole course of instruction in the same school in which they were appointed to teach*, and under the tuition of the same teacher, whose helps they were appointed to be. If we were to take our choice between a half dozen such young teachers, and one or even two ushers, we should infinitely prefer the former, even at a greater expense. But that they may be obtained at a less, is unquestionably true; and of their becoming very competent and skilful, we have not the least doubt, particularly if kept in employ for three or four successive years. Such persons, by thus serving an apprenticeship at the business of instruction, in the positive necessity of which we have the fullest belief, would become infinitely better qualified for the profession than any of our young men, fresh and green from the embrace of Alma Mater. We would be understood as meaning that they should pursue a systematic course of instruction and of study, aside from their regular and daily service as teachers, and that these studies should be directed with a view to the particular situation in which they might be expected to teach. Such an experiment has been made, and has resulted in entire success; and we can see no reason why

the method might not be adopted in every school in the country.

We had intended to say something upon the comparative efficacy of the system of mutual instruction when applied to our common schools, academies and high schools, and when to our colleges; and to show, that, in our belief, less danger and difficulty are to be apprehended in the latter, than in the former application of it. But we feel that we have already trespassed too far upon your time and patience. That some immediate and thorough reform, in these high seasons of reform, are loudly demanded for our common schools, we must all be persuaded. What method of reform shall prove at once the most expedient, the most expeditious, and the most salutary, can, we are persuaded, be best determined by the united wisdom and experience of the assembled instructors of the country. The present is a most propitious opportunity for the discussion of the entire subject. That this may be but the commencement of a long-continued series of numerous, of useful, and of harmonious 'gatherings of ourselves together,' is our ardent wish; and that they may result in the rapid improvement of each and of every establishment in which we are engaged, and in the wide diffusion of the blessings of universal education, is our most fervent petition.

MR WOODBRIDGE'S LECTURE.



LECTURE IX.

ON

VOCAL MUSIC

AS

A BRANCH OF COMMON EDUCATION.

BY WILLIAM C. WOODBRIDGE.

IN the United States, vocal music was usually regarded as one of the luxuries of education, until the establishment of Sunday Schools rendered it more general. During a visit to the continent of Europe, the speaker was surprised to find it almost a universal acquisition, and in several countries a branch of the national system of education. He became convinced of the importance and practicability of making it a part of our common education, and one of our manly amusements, and was led to resolve on bringing the subject before his countrymen.

The first point to be gained was to introduce a simple, rational method of instruction, which should render it *practicable*, instead of that mysterious and mechanical plan, which is generally adopted; and the second, to supply the species of music adapted to children, which should be simple, without being infantile, and elevated, without becoming artificial or unintelligible.

Both these objects have been effected in many parts of Germany and Switzerland. Music is regularly taught, both in theory and practice, and has become the delight of childhood, the amusement of youth, and the cordial of age. He resolved to do all which his ignorance of the science would permit for extending the same benefits to our own country, by bringing from abroad the music and the system of Switzerland, in the hope of finding persons able and willing to attempt a work which he deemed of no small importance to our national character and interests. Such individuals he has found: he has placed all these materials in their hands, and hopes soon to see the essential works before the public.

But another object still remains to be accomplished—to awaken public interest, and inspire public confidence; and this he fears will be the most difficult task. It was the reluctance to lose an occasion so favorable as the present, which induced him to accept the invitation to deliver this address, amidst the pressure of peculiar circumstances, which allow him no opportunity of doing justice to the subject.* It was the desire to convince others of the importance and the practicability of giving instruction to children in music, and thus to obtain coadjutors in the cause, and if possible to persuade every teacher to endeavour to introduce it into his school, and every parent to provide the necessary means of instruction for his children.

It is the same motive also, and not the desire of exciting the admiration of the audience or the vanity of the performers, which has induced him to invite a juvenile choir to exhibit to you some specimens of the music he has referred to; and he knows not how he can better win his way to your indulgent feelings, than by calling on them to aid him with one of these simple melodies.

* He has to regret that a train of similar circumstances, combined with ill health, oblige him to send it for publication, almost in the same imperfect form in which it was delivered.

THE MORNING CALL. C. M.

Allegretto.

p. p.
Friends, awake! From its slumber now a-

m.
waking, 'Thro' the distant darkness breaking, See the

m.
morn - - - ing star! Friends, a - wake,

f.
Friends, a - wake—wake.

ff.

2. Brother, wake!
Hark! the cheerful lark is singing,
And the hills and dales are ringing
With her joyful hymn.

3. Sister, wake!
Everything is now reviving—

Every one around is striving,
In some new pursuit.

4. All awake!
See! the sun with splendor beaming,
O'er the distant waters streaming,
Pours his glorious light.

The Creator seems to have formed an immediate connexion between the ear and the heart. Every feeling expresses itself by a tone, and every tone awakens again the feeling from which it sprung. Hence children and passionate persons increase their sorrow or their anger by cries, or heighten their joys by shouts.* Hence the instinctive huzzas of a joyous crowd; and hence we may trace the origin of vocal music. The feelings of the more passionate produced a succession of varying sounds. The ears of the more sensitive perceived these variations, and their skill was employed to imitate them, in order to awaken anew the same feelings, in connexion with the rude recitation of traditional history, or the more refined melody of the poetic tales of Bards or Troubadours. They roused to war, and soothed to peace—they kindled anger, and awakened joy, and calmed the paroxysms of sorrow and passion—and the influence of David's harp, and the effects of songs in the battles of the barbarous Germans, and the melting power of the sweet *Ranz des Vaches* on the Swiss soldier, would seem to indicate that the tale of Orpheus is but half a fable.

' When Music, heavenly maid, was young,
While yet in early Greece she sung,
The passions oft to hear her shell,
Thronged around her magic cell,
Exulting, trembling, raging, fainting,
Possessed beyond the muse's painting.'

But whether it be owing to the deteriorating character which Buffon ascribes to the new continent, or to the withering influence of our rude and variable climate, or to the inhospitable treatment she has received, this well nigh fairest of the muses has lost her power of fascination on this side the Atlantic. Her voice has become harsh and dissonant; her

* I cannot omit, on such an occasion, the important maxims suggested in educating ourselves and others. He who governs his voice, will find it easier to govern his feelings; and he who allows himself to use habitually the tones of passion, will increase its strength.

palsied head moves in unequal time ; her lyre, notwithstanding every effort of a few distinguished masters to keep it in tune, has lost half its cords, and more than half its harmony ; and her trembling hand wanders among the few remaining strings, without regularity or force.

We listen, we criticise, and sometimes we are delighted with music ; but how seldom do we feel what the melody is designed to express ! Whether it be in the solemn service, or the social circle, it is too often retained, like some old servant, from mere habit, and is generally heard with listless indifference, or positive uneasiness, even by ears that are not tortured with its jarring notes. It sometimes excites a smile, when it is intended to call forth a tear ; and its joyous notes are too often only a discordant clamor of voices. Could we but divest it of the artificial character which a false taste has given it, and bring it back to its native simplicity ; could we but employ the voice of childhood in its execution, and gradually train up the whole community to join in harmonious chorus, we might then hope to restore to music its pristine beauty, and its soul-subduing power. It might again soothe to rest the sons of sorrow. It might assist in subduing to peace the unsated cravings of the lust for gold, the devouring rage of ambition, and the ferocious spirit of party that infest our lands—more unsparing, more desolating in their ravages, than the wild beasts that were subdued by the harp of Orpheus. It might do much to calm the demoniac passions, and overcome the grovelling propensities which follow in their train. It might assist in elevating our hearts to the Author of our being, and invigorate us in our progress toward heaven, and give us many a foretaste of its joys on earth.

The *immediate object* to be accomplished by making vocal music a branch of common education, is, to cultivate one of the faculties which our Creator, in his wisdom, has seen fit to bestow upon us. To neglect it, is to imply that it was unnecessary—that it is useless. It is to treat a noble gift in a manner which in any other case would be considered as disrespectful and ungrateful.

But the *ultimate objects* are those for which it is obvious this gift was bestowed. The first and highest is to unite with our fellow Christians in expressing our gratitude and love to our heavenly Father. In doing this, we rouse and excite our own devotional feelings, and stir up each other to new life in the worship of God. For these purposes, God himself commanded the use of music in the Israelitish church. Indeed, he has written this law on the hearts of men. Scarcely a temple, or a service, has ever existed, except in Mohammedan countries, in which music did not occupy an important place.

In this view, the subject is of great importance. The defects in our church music are felt as well as admitted; and no thorough improvement can be made without acting on the rising generation. 'In order to produce its proper effects,' as an able writer on music observes, 'it must not be a mere tickling of the ear, in order to effect through that medium the susceptible nerves, and never reach the heart. We have degraded it by making it a mere instrument of gratifying the senses.' We must elevate it, by employing it as one of the wings of devotion, in union with poetry, its sister art.

But it is highly useful as a means of refreshing the weary mind, and is perhaps the only employment which leaves the intellect in complete repose. On this account it is peculiarly important to literary men. A distinguished professor of the island of Sicily, on hearing the sad tale of the influence of study on our literary men, asked me, 'What amusements have your literary men in America?' As you will readily imagine, I was only able to answer—*None*. He expressed his astonishment, and added, 'No wonder they are sick, and die of study.' He informed me that he spent a stated portion of the day in recreations, of which instrumental and vocal music were an essential part, and thought he could not live without the relief which they gave his mind.

Vocal music is also very useful, by its direct effect on the constitution. It was the opinion of Dr Rush that young la-

dies especially, who by the custom of society are debarred from many kinds of salubrious exercise, should cultivate singing, not only as an accomplishment, but as a means of preserving health. He particularly insists that it should never be neglected in the education of females; and states that besides its salutary operation in enabling them to soothe the cares of domestic life, and quiet sorrow by the united assistance of the sound and sentiment of a properly chosen song, it has a still more direct and important effect. 'I here introduce a fact,' he remarks, 'which has been suggested to me by my profession, and that is, that the exercise of the organs of the breast by singing, contributes very much to defend them from those diseases to which the climate and other causes expose them. The Germans are seldom afflicted with consumptions, nor have I ever known but one instance of spitting blood among them. This I believe is in part occasioned by the strength which their lungs acquire by exercising them frequently in vocal music; for this constitutes an essential branch of their education. The music master of our academy has furnished me with an observation still more in favor of this opinion. He informed me that he had known several instances of persons who were strongly disposed to consumption, who were restored to health by the exercise of their lungs in singing.'

As the mere expression and excitement of cheerfulness, music is a precious gift of God; and it should be used as a means of enjoyment, that it may lead us on to devotion. The ear as well as the eye is made the inlet of pleasure, that we may first enjoy it, and then, by learning its value, be made thankful to Him who bestows it. The late President Dwight observed, 'The great end of God in the creation is to make men happy, and he that makes a little child happier for half an hour, is so far a fellow-worker with God.' Could music be introduced into common schools, would it not make many little hearts leap with joy? For this purpose, the words and the music must be of the proper character; and I would beg my young friends to present you with a specimen of the

hymns of this kind employed in Germany and Switzerland,—the mere expression of childish pleasure.

THE GARDEN.

O come, to the garden, dear mates of the

school, And rove through the bowers so fragrant and cool.

2.
We'll gather the lily and jessamine fair,
And twine them with roses to garland our hair.

3.
We'll cull all the sweets to make a bouquet
To give to our teacher this warm summer day.

4.
Then hie to our school-room, with joy and with glee,
And sing our sweet ballads, so happy are we.

Could we furnish children with the means of amusement which songs like this would afford, I think it is obvious that we should divert them from others of doubtful or injurious character. Could we give our young men such a means of excitement, by music appropriate to their age and feelings, we should diminish the temptation of resorting to stimulating liquors or other questionable means of producing cheerfulness. I have known and visited a village in Switzerland, where a set of drinking, disorderly young men were led, by the cultivation of music among them, to an entire reformation, which was regarded with as much surprise as the change in regard to temperance in our own country. I have seen them, when they met at a public house, resort to this method of rais-

ing their spirits, instead of drinking, and spend their time in singing songs and hymns, adapted to improve the mind and elevate the heart, instead of the profane or indecent conversation, or noisy clamor which is generally heard on such occasions.

But music also has an effect which cannot be doubted in softening and elevating the character. It diminishes the strength of the passions, by keeping them, for a time at least, in a state of inaction. It counteracts them, by producing the opposite and softer feelings. On this subject allow me to quote the opinion of Luther, whose well known skill as a composer of music, no less than his character as a great reformer, must give weight to his opinion.

‘I ought now to speak,’ says he, ‘of the utility of this noble art, which is indeed so great, that no one, however learned he may be, can give a satisfactory account of it. This one thing I can declare (of which I am convinced by experience also,) that according to the sacred Word of God, no art deserves so much celebrity and praise as music; inasmuch as it has a mighty control over every movement of the human heart, and often governs and restrains mankind, as their Lord. Stringed instruments and the lower animals utter *sounds* merely, and are incapable of language. Man, however, was endowed with the powers of *speech*, that he might be able to speak and sing the praise of God at the same time, and thus magnify his goodness and grace by the combined efforts of both.—When natural music, however, is highly cultivated and polished, then we ascertain, for the first time, in part, (for it never can be fully understood,) and with astonishment, the great and perfect wisdom of God, displayed in this curious art. Wherefore, I recommend it to every man, particularly to youth, and hereby admonish them duly to love, honor, and esteem this precious, useful, and cheerful gift of God; the knowledge and diligent use of which, will, at all times, drive off evil thoughts, and diminish the effect of evil society and vices.’

So universal and essential was a knowledge of it at that

time among teachers, that Luther observes, 'It is necessary that this art be taught in schools. A schoolmaster must be able to sing, or else I will not *look upon him*. The youth must always be accustomed to this art, for it makes good and virtuous people.'

Plato says, 'Bodily exercise is the sister of pure and simple music; and as exercise imparts health to the body, so music imparts the power of self-government to the soul.' In accordance with this sentiment, I am convinced that it has no small influence on school discipline. I was struck with the superior order and kindly aspect of the German schools in comparison with our own, and ascribed it not a little to the cultivation of music in them. Those who unite in singing with their fellows and their master, will be more disposed to be kind to the one, and obedient to the other.

In addition to this, the study of music, from its very nature, cultivates the habits of order, and obedience, and union. All must follow a precise rule. All must act together, and move in obedience to a leader; and the habit acquired in one part of our pursuits necessarily affects others.

But we cannot give music its full influence without combining it with words. It has in this way been made the handmaid of vice, and the companion of depravity, and its influence has been fearful. It should be converted to a better use. 'Let me make the ballads of a nation, and you may make their laws,' said one who was well acquainted with human nature. The maxim is one of obvious soundness. The law is but seen in shadow, and its threatenings heard as distant thunder. Even the pulpit brings forth its instructions only weekly; and the preacher often writes upon a sand beach, from which the returning tides of the business of the week speedily efface almost every vestige of his instructions. But the ballad is fixed in the memory by the association of rhyme and sound: it is constantly brought home to the heart by the sweet influence of melody; and while the law is out of view and the sermon forgotten, it repeats and reiterates its expres-

sions until it penetrates the hardest heart, and fastens itself in its strongest feelings. Let us but have hundreds of hymns, not merely sacred, but *moral, social, and national*, which shall convey elevated sentiments and stimulate to noble acts, and we send forth so many little messengers of good, which can penetrate even through the walls of a castle, and be conveyed on the wings of the wind to every quarter of the globe. Some of the best European airs have been found by travellers transported to the centre of Africa.

Especially will this be the case, if these songs are associated with familiar objects and events. The Germans have hymns for children and youth, on the Rising Sun, the Morning Star, Harvest, a Storm, a Forest, &c., which are recalled every time the objects are seen, and thus all nature is made vocal.*

A specimen of this class of songs, will best show you their tendency.

THE RISING SUN.

Andante.

Array'd in robes of morning, His daily course to

run, The world with light a - dorning—Behold

*The pupils of the agricultural school at Hofwyl, on returning from their labors at night, saw the evening star rising, and immediately, with one accord, struck up the appropriate song. Such occurrences are frequent, and during my residence at Hofwyl, I have often heard them going to their work before day, uniting, in chorus, in a morning hymn or a harvest song.



2 With grateful hearts and voices,
We hail thy kindly rays ;
All nature now rejoices,
And sings thy Maker's praise.

3 O shed thy radiance o'er us,
And cheer each youthful mind ;
Like thee our Lord is glorious,
Like thee our God is kind.

But many, who are ready to admit the pleasure and the profit to be derived from vocal music, suppose that they can never be extended to the mass of the community. We are met on the threshold with the objection, that this branch of education must be reserved for those who have what is termed a 'natural ear' and a 'natural voice,' and that only a few persons can distinguish musical sounds, and imitate them accurately.

If the grounds of this opinion are demanded, we are presented with a greater or less number of individuals in society, who tell us they cannot distinguish one sound or one tune from another—that they know not whether notes are high or low ; accordant or discordant ; and that they cannot imitate any of them.

The first difficulty sometimes arises from not understanding the terms employed. Sounds, like colors, cannot be described in words. They must be taught by examples, patiently repeated and carefully attended to, until the ear is familiar with them ; and gradually extended, as its powers of discrimination are increased. I have known cases in which persons who said they could not distinguish one note from another, have found no difficulty in doing it, as soon as a few notes had been sounded before them, and the use of the appropriate terms had been illustrated.

But, in addition to this, the examples taken are not fair ones. They are of persons whose ear and vocal organs have been formed to certain habits so long, that they cannot be

supposed to be so susceptible or flexible as they once were. Read a portion of French or German to the same individuals, and see if they can distinguish the similar words and sounds at once. Call upon them to pronounce the nasal and guttural sounds of these languages ; or require a foreigner to pronounce our own language, and it requires no second sight to determine that they would not succeed better than in music. Is this an evidence that they have not a natural ear or a natural voice for German, or French, or English ? Surely not. Why then apply this reasoning to music ? Indeed, the argument would be more applicable to language, so far as experience extends. Who ever heard of an individual who spent whole days, for several years together, in singing, who did not find an ear for it ? But we have few examples of men who pronounce a foreign language without obvious errors, even after years of study or of residence in a country where they speak it incessantly. Until we are presented with individuals who were taught music as they were taught language, from their childhood, and who still cannot distinguish or imitate musical sounds, there is no good reason for admitting that any considerable number of persons are naturally destitute of an ear for music.

I do not mean to deny that there are defects of hearing of every degree, from absolute deafness, to mere dulness of hearing, which renders it difficult to perceive nice distinctions, and so on to a perfect state of the organ ; nor that some individuals may have a natural rigidity or other defect of the muscles and cartilages of the mouth and throat, as others have in their limbs. Nor have I any doubt that great natural differences exist as to the degree of accuracy in imitating musical sounds, as they do in the distinctness of articulation and the correctness of reading, in those whose organs are not obviously defective. But I am satisfied from the testimony of those who have had extensive means of observation and experiment, both in this country and in Europe, as teachers of music, as well as by an obvious course of reasoning, that

these cases are almost as few in number as those of the lame, and the deaf and dumb. Vehrli, the remarkable teacher of the agricultural school in the institution of Fellenberg, assured me that among several hundred poor neglected children confided to his care, he had found only two whom he could not teach to sing.

Pfeiffer, the author of the Pestalozzian system of instruction in music, informed me, that he had found not more than one or two in ten, who could not be taught to sing. The same opinion was expressed by most of the practical teachers I met with in Europe. The few I found of another opinion, were men whose exquisite sensibility of ear and of nerves, rendered the discord of a learner's notes a species of torture, and who therefore could not exercise the patience necessary to go through an elementary course, except with very apt scholars. The same difficulty would probably have arisen, if they had attempted to teach their own language to a foreigner. Several of the most experienced teachers of music in our own country have assured me that the result of their experience was the same. One who has taught four thousand pupils, and enjoys much reputation as an instructor, assured me, that although he found the same variety in these organs as in others, he never found an individual who could not be taught to sing.

But we shall find substantial reasons for believing this true, arising from the nature of vocal music. It consists of a succession of vocal sounds, some of which are long and others short, some slow and others quick, some high and others low. Now what else is speech? Speech also has high and low sounds, slow and quick, and long and short; and these variations have been reduced to a system of surprising accuracy. Chapman, in his *Rhythmical Grammar*, and Rush and Barber, in their works, have pointed out very clearly the musical intervals, which are necessary in order to speak and read correctly and intelligibly. They have shown that in order to ask a question, the voice usually rises a third, or three

tones ; that when the question is more earnest, or asked with surprise, the tone is a fifth higher than usual ; and that when the earnestness is still greater, the voice rises eight tones ; and that these intervals are to a considerable extent uniform. The answer falls in the same manner. The rapidity and force with which we speak, obviously vary with the state of our feelings. In short, a very little examination will show us that our speaking is in effect a kind of singing. This, indeed, is the great obstacle which a foreigner has to encounter in learning our language—and the want of it is that which we term a foreign accent. It is evident, then, that every man who understands the difference between the mode of pronouncing a question and an answer, and between a common question and an earnest one, can distinguish a high note from a low, and can even tell the difference between a third and a fifth. He must, therefore, so far, have a musical ear.

The ordinary tones of voice are in the major key. The tones of distress, or the whine of a beggar, are in the minor key. If he can *distinguish* these, he proves that he has, to this extent at least, a musical ear. If he can *imitate* all these various sounds, I know not how we can deny him a musical voice. In short, he who can discriminate the variations of speech, can distinguish musical sounds. He who has learned to *speak correctly*, may learn to *sing*.

We cannot omit noticing a topic which properly belongs to another lecture,—that practice in music will be the best preparation and aid for the formation of good readers and good speakers, and that he who does not understand something of musical tones, and has not habituated his organs to the sudden and precise variations which they require, cannot understand perfectly the modern rules of elocution, nor enjoy the full benefit of the excellent instructions we now have in this art.

In regard to all the efforts yet made among us, to ascertain how large a portion of the community can be taught vocal music, the experiments have been desultory in their character,

short in their duration, and generally conducted by unskilful hands. Nothing then can be inferred from them against a new experiment, at a period when the habits of the body and mind are not fixed. But the complete answer to all doubts on this point is furnished by the fact, that wherever the experiment has been made at the proper age, and in the proper manner, it has been successful.

I have already stated that it forms a part of common school education throughout Germany and Switzerland. In the improved schools, it is deemed no more difficult, and no more remarkable to read and write music, than language. I have also quoted the opinion of Luther, as to its importance. Allow me to add the opinion of distinguished men of the same countries, both in regard to the importance, and the practicability of teaching it to all.

Niemeyer, one of the most celebrated writers on education in Prussia, observes ;—‘ The organs of speech are improved by singing ; the ear is formed and rendered more acute, and the well known power of music, even upon savages, proves that we should least of all neglect a branch of instruction which exerts so important an influence in softening the passions, in elevating the social and finer feelings, in aiding the moral cultivation, and cherishing the spirit of devotion.’

Schwartz, one of the surviving fathers of education in Germany, remarks ;—‘ In the cultivation of the ear, we have a means of cultivating the harmony of the soul and the purity of the heart, and of promoting heavenly love and spiritual life, which will probably not be fully appreciated for a long time to come.’

Denzel, a veteran of this cause, who has been employed in organizing the school system of two of the German States, observes ;—‘ The formation of the voice is too important, and the influence of vocal music on the mind and heart too great, to permit us to dispense with it in common schools. It is no longer doubted that it ought to constitute a branch of study, in every institution for elementary education.’

Harnisch, a distinguished educator of Prussia, quotes the following remark from Richter ;—‘ We cannot imagine a complete education of man without music. It is the gymnastic of the affections ;’ and adds, ‘ Music and bodily exercise, in suitable connexion, are necessary to keep body and soul in health.’

Fellenberg observes ;—‘ We have learned from experience how much musical exercises contribute, not merely to the pleasures of society, and to the formation of the taste (which often affords more assistance to human weakness, in resisting evil, than cold principles of morals,) but also to religious elevation, and the spirit of devotion.’ Vehrli, the instructor of the agricultural school of Hofwyl, regards vocal music as of the highest importance ; and observes, that he has uniformly found, that, in proportion as it was improved, the spirit of kindness and devotion among his pupils increased.

Pfeiffer and Nageli, the fellow laborers of Pestalozzi, and writing under his direction, express similar opinions in similar terms. An author who quotes them, observes ;—‘ These authors have not only given an impulse to singing, but have pointed out the only true way of teaching it. Their efforts have not been fruitless ; for music is already taught, both in our country and city schools, with the greatest success ; and what has already been accomplished, in this respect, would, not long since, have been deemed impossible.’

But no more decisive evidence can be required than that of the government of Prussia, which has done more than most others in Europe for the improvement of common schools.

The following ordinance, extracted from the Prussian official Gazette, (Amts Blait,) Cologne, January 15, 1828, will show the light in which this subject is viewed by that government.

‘ Among the essential branches of education, which ought to be found in all common schools, and to which every teacher who undertakes the management of such schools, is in duty bound to attend, is instruction in singing. Its principal ob-

ject in these schools, is to cultivate the feelings, and exert an influence in forming the habits, and strengthening the powers of the will, for which mere knowledge of itself is often altogether insufficient ; hence it constitutes an essential part of *educating instruction*, and if constantly and correctly applied, renders the most unpolished nature capable of softer emotions, and subject to their influences. From its very nature, it accustoms pupils to conform to general rules, and to act in concert with others. It is far more sure of producing such an effect in youth, when the heart is very susceptible of impressions of this kind ; and no importance should be attached to the assertion of many teachers and directors of schools, that we can by no means anticipate this influence upon such wild youths as are found in the country. In general, this belief originates entirely from old prejudices, from a want of proper experience, from a love of indolence, or from an inadequate knowledge of the course and method of instruction. Convinced of the certainty of the result, where the means are correctly employed, we shall not stop to consider such objections as appear to be grounded solely upon exceptions. On the other hand, we shall hold those teachers in particular esteem, who labor, in this subject, with suitable zeal and success, in the conscientious discharge of the duties of their calling. We expect also that these efforts, together with their results, will be particularly noticed in the Report of the School Directors.

‘ Having recommended this important object of primary instruction, (the immediate connexion of which with religious instruction no one can fail to perceive) to the zealous exertions of the teachers, and the careful attention of the directors of schools, and, at the same time, having urged the study of the best writers upon the subject, which, so far as they relate to school instruction, ought to be found in the libraries of every district,—we shall here bring forward one point, which demands a closer and more universal attention.

‘ If instruction in singing is to accomplish with certainty the objects proposed, it must be *long continued without interruption*, and, of course, it is indispensably necessary that a regular at-

tendance be required during the continuance of the duties of the school, and enforced in the strongest manner.'

It is unnecessary to illustrate the contrast between the last remark and the usual desultory mode in which singing is taught.

But the experiment has been tried in this country also. The system was first introduced, in Hartford, Connecticut, during the present summer. Several juvenile choirs were trained in a few months to sing in a manner which surprised and delighted all who heard them, by their accuracy in time and tone of expression. It was introduced into the infant school in that place with equal success,* and a distinguished musician who visited it observed, in a letter on the subject, 'I entered upon the examination of the system with some prejudices; but the more I have examined it, the more I am convinced of its superiority over the common method, especially in the simple manner in which the principles of music are presented to the mind of the child. The pupils of the infant school which I visited, after a short period of instruction in rhythm (time) only, surpassed in accuracy of time our ordinary choirs of singing.'

The time allows but a very brief sketch of the mode of teaching music, to which I have referred.

The *inductive system* of instruction was introduced in Switzerland and Germany at the end of the last century by Pestalozzi, and has been adopted in this country, in reference to some subjects. Early in the present century it was applied to *music*, in the institution, and under the direction of Pestalozzi, by Pfeiffer and Nageli, who published a manual of instruction on these principles in 1810. This system has since

* Both these experiments were made with disinterested zeal by Mr Ives, now a teacher of music in Philadelphia. A manual of instruction by this gentleman will soon be published, to accompany the *Juvenile Lyre*, a collection of songs for children, chiefly translated from the works of the Swiss and German composers, prepared by Mr Lowell Mason, President of the Handel and Haydn Society of Boston.

been diffused throughout the central portions of Europe, under various forms, and is acknowledged, in its fundamental principles, to be the only true one. These principles are,—

1. To teach *sounds before signs* ; to make the child sing before he learns the written notes, or their names.

2. To lead him to observe by hearing and imitating sounds, their resemblances and differences, their agreeable or disagreeable effect, *instead of explaining* these things to him : in short, to make him *active*, instead of *passive*, in learning.

3. In teaching but one thing at a time. *Rhythm, melody, expression*, are taught and practised separately, before the child is called to the difficult task of attending to all at once.

4. In making them practise each step of each of these divisions, until they are masters of it, before passing to the next. For example, crotchets must be perfectly familiar in practice, before learning quavers ; four notes must be sounded without hesitation, before learning the octave ; and the elements learned must be combined in every possible form, before learning new ones.

5. In giving the *principles and theory after practice*, and as an induction from it.

6. In *analyzing and practising the elements of articulate sound*, in order to apply them to music.

7. Another peculiarity, which is not, however, essential to the system, is, that the names of the notes correspond to those employed in instrumental music, and are derived from the letters with variations for flats and sharps ; a method whose utility is questioned by some, but which is deemed very important by others.

It will perhaps be useful to describe the manner in which these principles are applied. Instead of presenting a confused collection of mysterious characters, to serve as the mere signals for certain efforts of the voice, the reason and connexion of

which are never explained, and thus leaving the pupil the painful and humbling task of groping his way blindly in the steps of another, he is first called upon to utter a *single distinct sound*, and then a letter or word. He is told that the one is called a musical tone, for which the note is the sign; and the other an articulate sound, used in speaking, for which letters are the signs. He thus arrives at a simple conception of song, as distinguished from speech. He is then required to increase or diminish the length of the sound two fold or four fold, and learns the appropriate signs for notes of different length. He discovers the importance of some standard of length for these notes, in order that many voices may sound in unison. His attention is called to the manner in which measure is employed to regulate movement in threshing, hammering, marching, &c. He is requested to unite with his companions in marching around the room, in movements of the hands and feet, in pronouncing words and syllables; and is thus easily led to appreciate and to practise the beating of time, an operation usually so mechanical and disagreeable to the novice in music. He is brought, by experiment and example, to perceive the agreeable effect that may be produced by a series of monotonous sounds, from the mere variation of length and accent. This encourages him to that course of practice which is necessary to produce accuracy in measure, and prepares him to make the proper use of melodious sounds.

The next exercise of the pupil is to listen to sounds which differ in their pitch, to exercise his ear in discriminating between the higher and the lower, and then to imitate them. Several series of tones in succession are made in his hearing. He is called upon to decide which is most agreeable, and is gratified with the discovery that he has selected those of the octave, which forms the basis of music in every nation upon earth.

In order to apply the knowledge he has gained, he is now made familiar with the first half of the octave, and learns to understand and practise the combinations of which

these sounds are susceptible, before he proceeds to the second half. A few experiments will teach him the agreeable variations which may be produced in these same sounds, by the aid of emphasis and swell, and to perceive how they may be adapted to the expression of different feelings.

He is next led to perceive the striking difference which may be produced by a slight variation in the interval between some of these notes, and to discover the plaintive character of the minor key, and the peculiar effects of the various scales.

Two notes are next sounded together in his hearing, and then many others in successive pairs. He is called upon to decide which combinations are agreeable and which are disagreeable, and learns, with surprise, that he is pleased with those which all nations have pronounced to be in accord, and that he dislikes those which all have declared to be discords.

At every stage of his progress, the pupil is taught how the variations of sound he is learning may be applied in rendering language more expressive, and poetry more interesting. But this part of the course is equally removed from the ordinary mechanical mode of merely attaching a word to a note, or the still more objectionable system of obliging children, before they can sing correctly, to repeat the solemn and touching sentiments of psalms and hymns, as mere exercises of voice, in every variety of discord, and without any attention to their meaning. The most simple and childlike language on common subjects is combined with the first notes learned. Words of a more interesting or poetic character are gradually introduced, as the child acquires the skill in music necessary to give them their proper tones and emphasis. Every stanza which he sings, must first be explained and understood. He must be taught to consider in what manner the words and notes must be uttered, in order to show the idea most clearly, and express the feeling most fully, and is thus led to discover the connexion between the ear and the heart. Above all, the explanations must be such as to awaken in him the feeling appropriate to the subject; and he must never be suffered to

employ the language of devotion without being taught its full import, and called upon to use it with corresponding feelings.

From all these particulars, he learns, what is vastly more important to his future progress and independence of mind than any accomplishment, that music, like all other sciences, is a collection of facts, and of principles deduced from them, which it is completely in his power to observe, and to verify.

With a method like this, the rising generation may be prepared to occupy their hours of vacancy, to give delight to those around them, and to make the praise of God glorious ; while their own views are enlarged, their capacities developed, and themselves trained to habits the most important, and feelings the most elevated.

The first and most important thing to do is to get a good
 understanding of the problem. This means that you need to
 know what the problem is, what the goals are, and what
 the constraints are. Once you have a good understanding of
 the problem, you can start to think about how to solve it.
 The next step is to come up with a plan. This means that
 you need to decide what steps you are going to take to
 solve the problem. Once you have a plan, you can start to
 work on it. The final step is to check your work. This
 means that you need to make sure that you have solved
 the problem correctly and that you have met all the goals.
 This is a very simple way to think about problem solving.
 It is a good way to think about problem solving because
 it is easy to understand and it is easy to follow.

MR JOHNSON'S LECTURE.

THE NEW YORK PUBLIC LIBRARY

LECTURE X.

ON

THE IMPORTANCE OF LINEAR DRAWING,

AND ON THE METHODS OF

TEACHING THE ART

IN COMMON SCHOOLS AND OTHER SEMINARIES.

BY WALTER R. JOHNSON,

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THE second aphorism of Bacon's *Novum Organum* contains a maxim of practical wisdom to which instructors may profitably recur in conducting the arduous duties of their profession.

‘The hand alone, unaided by tools and implements, and the understanding alone, if compelled to depend on its unassisted energies, will seldom accomplish any important purpose. The business of both is effected by appropriate *instruments* and *means*, the employment of which is not less necessary to the *mind* than to the *hand*.’

Among the *means* of mental culture, and scientific progress to which the great philosopher alludes, it often happens, that, what conduces to give skill in manual execution, contributes likewise, in no slight degree, to foster and develop the faculties of the mind.

While, therefore, mental power, moral feeling, delicate

taste, and correct knowledge, are the ends of instruction, the means of their attainment must be constantly and distinctly kept in view. It were vain to expect the fruit of that tree, from which we had lopped the supporting branches and stripped the sheltering leaves. Equally preposterous were the anticipations of intellectual vigor, where we had required no efforts at comparing, judging, reasoning; or, of moral sensibility, where example, admonition, habit, had not conjoined their salutary influence; or, of refined sensibility to the beauties and deformities of nature and of art, where no models of excellence had been exhibited, and no discriminating guide had pointed out peculiar beauties or warned us of peculiar imperfections; or, of accurate comprehension of facts and principles, where verbal expressions alone had been presented to the understanding, and no exhibitions of things had rendered their application familiar.

Among the primary means of effecting all these great ends of instruction, is the formation of a habit of accurate observation, with a view to obtain exact perceptions of things. And since the perceptions, especially of youth, are almost wholly founded on an examination of the forms and other sensible qualities of objects, it follows, that whatever renders these distinctly intelligible, and easily remembered, contributes, in an eminent degree, to promote the great aims of all rational instruction.

The delineation of objects by the art of design, is so obviously calculated to produce the effects just mentioned, that we ought perhaps to deem its neglect, in a course of education pretending to be based on philosophical views, to be matter of no slight astonishment.

It is generally admitted, that at an advanced period of education, when the art of composition has been learned, the description, in language, of scenes and objects, is a most useful exercise for impressing the distinctive peculiarities of the thing portrayed on the mind of him who describes it. We are in the habit of conceding, too, that the best mode to ex-

tend and confirm our knowledge of any branch of science, art or literature, is to become teachers in that branch, and thereby accustom ourselves to dwell on all the minute traces, as well as on the general outlines of the subject to be communicated. The world knows how far preferable is that knowledge of a subject, which has been gained from an intimacy with practical details, to that which has extended only to some general maxims and theoretical speculations; and how the man, who contents himself with the latter, is ever liable to erroneous deductions and mortifying exposures.

And can we doubt, that the same degree of devoted attention to give a *visible* expression of an object, the same anxious solicitude to render that expression exact, and the same detailed examination of parts, and combined views of the whole, would be as serviceable, in the formation of clear perceptions, as description, teaching, and familiar practice are, in producing *their* appropriate effects? It has often been said, with reference to the higher efforts of the fine arts, that the painter, statuary, and poet, see the works of Nature as they are beheld by no one else. And however we may suppose the expression to be figurative, in regard to the last, we may readily admit its literal application to the two former. The productions of the pencil, and of the chisel, doubtless demand a delicacy and discipline of the organ of sight, far beyond what is necessary for many other professions. To *artists*, therefore, the improvement of the eye is the *final purpose* of instruction in the elements of design, while as a branch of general education it is to be regarded principally as a *means* of improving the perceptive powers, and through them, the judgment, the memory, and the imagination.

Because the mind is that which gives power and dignity to man, because its culture and improvement is so worthy of the best efforts of genius, shall we, therefore, throw aside with disdain every *instrument* for improvement, which the bodily organs can furnish? Shall we reject, for example, the attainment of manual skill, merely on the ground, that the

process is unintellectual, unbecoming the dignity of scholarship? As well bid the student forego the customary gratification of his appetite, because the practice is *unscholarly*. Lay a tariff on all importations to the stomach, and where will you find the literary assemblage, throughout the world,—from the Wistar party that makes glad the sons of Penn, to the civic jubilee that annually revisits in their cradle, and rejoices the hearts of the children of the Pilgrims,—from those intellectual working-men, who make reprisals round the tible of a London bookseller, to those intellectual playing-men, who perpetrate such goodly puns round our Phibetian tables,—that will not, by most cogent arguments and examples, nullify your law?

It will occur to every mind, conversant with the intellectual nature of man, that the improvement of the perceptive powers, by the art of delineation, must necessarily involve strong, though pleasing, efforts of *attention* and *judgment*. Hence it becomes one of those engaging arts, which contribute to mature and perfect the higher faculties of the understanding, while it corrects and strengthens that power, on which all our knowledge of the external world is originally founded.

Far be it from me to recommend the substitution of any manual art or other exercise of sense, for the strenuous exertions of mind itself; but still farther be the thought of allowing any essential means for its early improvement to be disregarded or lightly esteemed.

We have thus far glanced at the benefits which result to the intellectual habits of the individual, from an early attention to the art of *delineation*.

But, however efficacious in improving the mind any branch of study may claim to be, its pretensions will scarcely be admitted by the public, unless it can advance some title to the character of direct utility. Tried by this standard, we have fortunately no ground to fear that the study in question will be found wanting either in interest or importance.

Turn to the numerous arts and trades, which are conversant with the exterior forms of matter, and which imply the necessity of frequent representations, and how multiplied will you find the uses, to which the art of drawing may, and must be applied! To say nothing of architecture, civil, military, and naval, observe only the growing interest in those branches of art connected with our internal improvements and national industry. For all these, what more necessary qualification, than the art of giving fair and accurate representations of the object to be executed? Plans of surveys, maps of towns, counties, states, and countries, sea-charts, and harbour and coast surveys, fall within the range of those operations in which drawing is absolutely indispensable. Consult the jeweller and the plate-worker, as to the utility of a ready pencil, in the prosecution of their respective callings. Go to the pattern-loft of the iron and brass founder, and observe the multifarious uses to which the able draftsman applies his skill. Have you occasion for an article of furniture of peculiar form, or of apparatus of certain proportions, from the glass-blower? He will demand of you, an accurate sketch of the creation which he is to bring out of his fervent chaos. Would the upholsterer consult and gratify the taste of his employers, in the furnishing and decorating of apartments? Then must he have it in his power, not only to follow some vague, general directions, but by combining and adapting, in his designs, the parts and proportions of ornamental work, give a foretaste of the pleasure which his completed performance will produce. The professed mechanician is ever busy with his drawing-board and pencil.

The artisan who produces our mathematical and philosophical instruments, understands full well the value of this art of linear description, and derives profit accordingly. The utility of the same art in the pursuit of anatomy and the various branches of natural history, will be readily acknowledged by every student in those departments of science. What shall we say, then, of engraving, calico-printing, paper-

staining, and the delicate ornamental work of porcelain manufactures? The growing art of lithography, in common with all those before mentioned, owes its success to the skilful hand and the discriminating eye of him who traces the design.

In alluding thus hastily to the practical uses of outline drawing, I have not attempted to exhibit the art as a mere accomplishment, and have not referred to its connexion with painting as a profession. That it may, and must, be made the basis of both, is too obvious to require elucidation. As taught in schools, it may be rendered subservient to attainments in those liberal pursuits; and the future ranks of our academies of fine arts may be supplied with recruits, from those who have laid the foundation of their fame on a thorough knowledge of the elements of drawing. This would unquestionably have spared to many an eminent artist, the pain and mortification of having produced only total failures, in many of his earliest attempts.

It must not, however, be forgotten, that, as a branch of public instruction, drawing will be chiefly valued in its connexion with the useful arts. The pride of having executed, by the aid of a superserviceable teacher, a few tolerable heads, or, perhaps, intolerable miniatures, is often the chief motive to exertion, among students in drawing. If an animal, or a bouquet have been added to the collection, the accomplished proficient is at the height of his or her complacency, and lays down the pencil, probably forever. Not so the student who pursues utility in a rational manner. What he executes is his own, and may be repeated either with or without a master, whenever occasion shall require. As reason and good sense have dictated his exertions, the same motives will urge him to extend and perfect his skill, when the affairs of life call for the exercise of his talents.

A single additional motive for cultivating the art of drawing, may suffice to be mentioned at present. In the general arrangement of the business of instruction, the art of reading precedes that of writing, and most persons may imagine this

to be a necessary order of things. That it is not so, will appear from the fact, that, in the early stages of penmanship, the process is wholly imitative, and that except in name, the thing to be imitated is entirely different from anything which the scholar has learned by reading. In general, the form of the English written character is as different from the printed as the latter is from the written alphabet of the Greek or German. Besides, the method of teaching penmanship, by analysing the characters into certain elementary principles, and forming classes on the basis of similarity, reduces the operation to a pure imitation; and learning to write, therefore, is nothing more than learning a peculiar modification of linear drawing. Now we are not without experience to show that a neat and elegant chirography may be attained by those who have never learned to read. Many deaf and dumb persons might be cited, as instances of this truth. The connexion therefore between reading and penmanship, is chiefly imaginary. Progress in one neither advances nor retards the first steps of the other. Hence, any preparatory exercises suited to introduce the pupil to the art of penmanship, may be taken independently of his acquisitions in reading; and even the art of writing, itself, may, if deemed expedient, be made the means of teaching the alphabet.

When the drawing of lines, in general, both with and without the aid of instruments, their division, relative positions, and various modifications, together with the formation of plane figures, and the terms applied to these various matters, have been made practically familiar to the pupil, he may proceed to that peculiar modification of linear drawing, which is executed with a pen, with the advantage of an acquired steadiness of hand; a habit of forming beforehand a clear conception of the thing to be done; a power of applying close attention to the written pattern; a judgment to discern differences and detect imperfections, and some degree of taste in regard to neatness of execution. All these things are known to be essential, in the acquisition of a good chirography, and

most of them are, in the prevailing system, left to be acquired simultaneously with the neat or elegant hand of which they ought to be the foundation. It is not surprising that when so many things are to be effected at once, some or all of them should be but half, or not at all, accomplished. Even ornamental penmanship, which may be shown, to be susceptible of the analytical method before mentioned, is sometimes forced upon the student in a mass, before any degree of taste, any boldness of movement, or any motions of design, have prepared the way for excellence.

The views just stated, which are the result of considerable observation, have been confirmed by the assurances of a distinguished teacher of penmanship, that the progress in writing, of pupils who have received good instructions in linear drawing, is generally far more satisfactory, than that of individuals who have enjoyed no such advantages. Systematic instruction in pencil drawing, must not, however, be confounded with any mere random mode of *marking* without any definite idea of the object; since the latter would contribute as little to a ready acquisition of skill in *pen-drawing* (a term which we may apply to the art of writing), as the same tentative process does, under the old school *régime*, when applied to penmanship itself.

As to the method of teaching the elements of drawing, a considerable diversity of opinion prevails, among those who have written on the subject. Rousseau maintains, that the pupil should, from the very first, draw only from natural objects, and *that* without the aid of a teacher. He would allow him to practise, what is so often done on walls, by the vulgar,—draw a man by representing each of the limbs by a single line, and the fingers thicker, perhaps, than the arms. He would trust to casual observations and reflections to correct these incongruities, and to repeated trials to bring the representations nearer and nearer to a resemblance of the original. He would accompany his pupil in this series of scribbling and daubing operations, and make himself appear almost or alto-

gether as little of a proficient as the scholar. He would give no instructions but what seem to come from lucky thoughts, arising out of some obvious error in preceding attempts. To excite self-emulation in the students, he would preserve the whole series of awkward attempts, putting the earliest and the worst, into highly ornamented gilt and glazed frames, but making the glass less costly, and the frames more simple, just in proportion as the pieces became more meritorious, until at length the best drawing is hung up in plain black wood. 'So that, to be put into *gilding*, will,' says he, 'in the view of myself and my pupil, one day become a distinction proverbially contemptible; and we shall wonder at the vast number of persons who are willing to be so justly dealt with, as to be hung up in *gilt frames*.'

Madame de Genlis' method is in every respect opposite to that of Rousseau. She contends, that the pupil should for several years be furnished with a drawing-master, who might give practical lessons in his presence, while the only occupation of the scholar should consist in carefully observing the performance, and noticing the various errors intentionally introduced. Some portion of time is also to be employed in examining books of geometrical figures, and portfolios of drawing-patterns, in visiting collections and sales in the fine arts, and in tracing beauties, as well as detecting faults.

In this manner, that part of a student's time, which is allotted to drawing, is passed, until the age of fourteen, when, having acquired the necessary taste and discrimination, he is, for the first time, allowed to use the pencil himself. Dexterity and flexibility of hand, are supposed to follow almost spontaneously, after the course of critical training, already described. The rewards of diligence and ability in judging the teacher's performance, consisted, according to Madame de Genlis, of counters, toys, and the gratifying applause of the superintendent.

Both the methods just described, must for obvious reasons be limited to a small number of pupils, and cannot therefore

be recommended, as part of a system of public instruction. A more simple and practical course, is, to commence by drawing simple, geometrical lines and figures, with a slate and pencil. And in this, some diversity of practice would be recommended by different authorities. While one would debar the scholar from the use of all instruments or other mechanical aids, compelling him to rely for correction, primarily on his own judgment, and ultimately on that of his teacher; another would allow the free use of a few simple instruments, to detect, with unerring certainty, every deviation from the intended effect.

When we reflect that children often pass several years of their lives, in learning to *see*; that when they feel sensible of an imperfection in their work, they may not be certain in what precise point it exists; that in correcting, by the eye alone, an error in one part, they may probably commit a greater in some other; that they are ever disposed to seek a *full assurance*, and ever dissatisfied with doubt and uncertainty,—we shall not hesitate to pronounce in favor of that method, which, while it requires a sedulous application of the eye and the judgment, and a certain degree of reliance on the perceptive powers, still places within reach of the scholar, the means of immediately deciding how far his judgment has been correct. The experience of several years has confirmed the deductions of reason in regard to this point of our subject, and led to the preparation, from a foreign language, of a small treatise* on the simplest elements of geometry, intended to furnish the preparatory lessons in drawing, and consisting entirely of problems to be performed and learned by the pupil, who is to execute every figure with the utmost exactness attainable either by his eye or his instruments. Every exercise, performed as a lesson in linear drawing, conveys also the definition of a *term*, or the

*The treatise above mentioned is entitled, 'First Lessons in Practical geometry; containing such Problems as are essentially necessary in exercising most of the Industrious Professions; intended for the Use of Students in Elementary Schools. Translated from the French of L. Gaultier. By Walter R. Johnson, Principal of the High School of Philadelphia.'

explanation of a process in practical geometry. A repetition of the geometrical course requiring greater reliance on the eye than at first, may generally be found profitable, chiefly for confirming the knowledge already acquired, but in part also for the purpose of varying and multiplying the exercises, at the discretion of the teacher. Having thus laid the foundation of his skill, the pupil proceeds to *linear drawing*, in the peculiar acceptation of the term, and executes his figures chiefly by the eye, with the aid of mechanical means for correction. In this stage of his progress, the slate and pencil continue to be used, but the patterns for imitation are taken from simple and familiar objects, actually drawn by the hand of a master on large paper, and mounted on *binders' boards*, as nearly as possible of the natural size, and with such distinctness as to be visible to the whole class. A proper classification of these models, enables the teacher to adapt the lesson to the attainments of his pupils. Instead of a pattern executed in the manner just described, the master sometimes draws the models in the presence of his class, on a black-board or colored wall, explaining the work, and pointing out the advantage of the particular succession of steps which he has adopted, and testing the accuracy of his work by large instruments when necessary. When the model, whether on paper or black-board, has thus been presented and explained to the class, each individual, being furnished with slate and pencil, proceeds to draw the same object of such a size as his slate will admit. The simplicity of the figures, will, in the first instance, be such, as to enable him to preserve the proportions. No measurements can now be made, since the figures are reduced in size ; but the rule and compasses may be occasionally resorted to, for the purpose of deciding whether any particular part of the copy corresponds to the obvious requisitions of the pattern. When a graduated series of thirty or forty patterns has thus been executed, at as many successive lessons, and the teacher has at each exercise examined, criticised; and recorded the merit of each scholar's performance, the whole may be repeat-

ed. But as some individuals will have made greater proficiency than others, a division of the class may now be expedient. While those who have made the greatest proficiency are allowed to draw the figures in a suitable drawing-book, in lead-pencil or crayon, with a view to permanent preservation, the second division repeat them in chalk on the black-board, on an enlarged scale; and the third and last class, having made the least advancement, are required to go over the whole series a second time with the slate and pencil. The simple rules of perspective are now to be explained as they severally occur. The next stage of the progress consists in drawing from separate patterns such figures as involve an acquaintance with perspective; as outlines of houses, landscapes, simple machines, and other inanimate objects.

The drawing of maps and charts may now be commenced. The delineation of parts of animated objects, such as the different human features and limbs, with the heads or whole forms of animals, may come in as the fourth series of exercises. The pleasure, which the pupil takes in this branch, will be found to rise with the increasing interest of the subjects embraced in his lessons. And if the collection of patterns be sufficiently extensive, some latitude may be allowed to his own taste, in regard to the nature of the subjects, and the order in which they shall be executed. But the judicious teacher will always exercise his own discretion, as to the limits within which the choice shall be confined.

The next step brings the pupil to draw directly from nature; that is, to make his copy immediately from a view of the object which it is to represent. The object itself may be either natural or artificial; the latter is however preferred for the first lessons in this series, for reasons similar to those which determined the selection of geometrical lines, as the first lessons on the slate. A few simple solids, not more than seven in number, are sufficient to afford examples of all the elementary forms of contour and shade; and by varying the number and relative positions of the different figures, an endless va-

riety of groups may be produced, to exercise the skill and taste of the learner. When the teacher has formed a group with which he is particularly pleased, he may sometimes take a sketch to be preserved for future use, from which he can at once arrange the pieces in the order desired. The models are made perfectly white, in order to give full effect to the peculiar light in which they may be placed, and that no false positions may be imagined from the apparent situation of accidental lights and shades, and to avoid distracting the attention with too many things at the same time.

The multitude of different pictures, produced by varying the arrangement of these few geometrical solids, depends, in great measure, upon the relative positions, the distribution and contrast of light and shade, as well as upon the arrangement of the outlines.

The scholar is now prepared to combine sketches and shades, and may consequently employ himself upon any subject where only a moderate variety of figure is to be presented. Machines, apparatus, and furniture, may be the subjects of his early essays ;—landscapes, into which animated figures are introduced, may follow ;—heads in crayon, or full-length figures of convenient size, may succeed to these, and henceforward the exercises may take such a direction as the interests of the school, the convenience of the teacher, or the future pursuits of the individual scholar, may render expedient.

The interests of the school may sometimes demand, that a number of large drawings should be made from plates, which, on account of their expensiveness, cannot be in the hands of every member, but from which the teacher may desire to give his illustrations. Should instruction in agriculture be among the objects of the institution, the teacher in that department would find innumerable applications in representing implements of husbandry, the form and position of the necessary buildings, the relative situation of gardens, meadows, fields and woodlands, with the modes of hedging or fencing in *model farms* ; the appearance and botanical characters of

the vegetable kingdom ; and the figures and peculiar *points* of domestic animals. Should instruction in natural history be attended to, in addition to the more obvious applications, we may observe, that the minute parts of creation may be drawn, of gigantic size, from an engraved plate, or from the screen of a solar microscope ; if from the former, the scholar will not fail to avail himself of the aid of *proportional compasses*, to obtain a correct general outline.

I need hardly advert to the uses which may be made of this art by the professor in chemistry, natural philosophy and practical mechanics. However extensive may be their cabinets of apparatus, or their collections of working models, a vast proportion of what they would desire to explain, must, if they confine themselves to these alone, be left unexplained. Teachers in these departments, sometimes employ the black-board only ; but the labors of a few scholars well instructed in drawing, may soon give permanency to those figures, which must otherwise be erased and afterwards repeated at every repetition of the course. In some cases, a very moderate share of improvement will enable the scholar, in pursuing this method, to render important services to his teacher.

Even in the classical departments of education, how much more clearness of conception, and how much higher satisfaction, would be derived, from illustrations of antiquity, made by the hand of a pupil and explained by the living voice of his teacher, to a class or a whole school, than are obtained from the solitary investigation of the student, which, on account of the forbidding aspect of the notes and dissertations contained in his text-books, often amounts to no investigation whatever. The number of text-books used in a classical school is generally very limited ; so that it would commonly be no difficult matter to obtain a complete series of illustrations of the Greek and Latin courses. Of these the teacher might avail himself, presenting one or more at every lesson, and either giving the necessary explanations, or requiring them from the class. The latter method would stimulate to greater industry in studying

the notes as well as the text of their class-books. An extensive practice in this department, employing large engravings and lithographic prints, has convinced me, that classical study may be rendered nearly as attractive by this species of demonstration, as any branch of physical science; especially, if the *means* of demonstration emanate from the skill and diligence of the pupils. A succession of classes might thus leave behind them permanent, visible, useful memorials of their diligence and assiduity in cultivating a taste for ancient learning, while they improved their skill in a most useful art. A large port-folio of drawings, adapted to each class book, bearing the proper references, and inscribed with the names of the respective students by whom they were produced, would, I apprehend, be a powerful auxiliary to the classical teacher, whatever might be his own learning or abilities.

But if neither the interests of the school, nor the convenience of the teacher, demands the exercise of the scholar's talents in drawing, it can seldom happen that his intended profession will be wholly unconnected with the applications of design; and therefore he can never feel at a loss for subjects tending to improve his skill, and to enlarge, or more deeply to impress, his knowledge of subjects in which he is individually concerned.

I have already referred to the connexion between drawing and penmanship, and will only mention in this place, that the plan which has been suggested by a writer on the subject, of performing both on the same or on opposite pages of the same book, may probably be found useful in exhibiting, at a view, the concurrent improvements in the two branches, and even when the drawing cannot, from its size, be admitted into the *copy-book*, it may not be amiss to cause the scholar to place a specimen of his writing on some part of the sheet. A degree of care will thus be induced, not always attainable in his ordinary writing lessons, and some improvement will not fail to be the result. The *first lessons*, consisting of small geometrical figures, may certainly be drawn in this manner, and the exer-

cises in writing may consist of a copy of the problems and directions, whenever the improvement of the pupil in penmanship is sufficient for that purpose.

As to the *drawing materials* to be introduced into schools, especially for boys, I would recommend that they be confined principally to slate-pencils, lead-pencils, common crayons, and Indian ink, believing from experience, that the introduction of other *colors*, would, in most schools, be a source of more inconvenience than profit. The procuring and preparing for use, of suitable patterns, will probably present itself as a difficulty in the first introduction of this as a branch of school education; but this obstacle will soon disappear, if teachers and others manifest a disposition to cultivate the study. The presses of our engravers and lithographers, to say nothing of foreign sources, are sufficiently prolific, and might soon be induced to furnish abundant supplies. We have not seen that the calls of the public for improved school-books, were either tardily or sparingly answered; and there can be no reason to believe that those who work on stone, box-wood and copperplate, will be less vigilant for the public good, than their more numerous brethren of the type.

I have thus endeavoured to exhibit a practical view of the subject before us, noticing its connexions and tendencies in regard to intellectual improvement, its bearing on the useful arts and various occupations of life, its relation to another branch of early education of great practical importance, the methods in which its elements may be successfully communicated, and its usefulness in reacting on other departments of science and literature, throwing new light on the paths of learning and sensibly alleviating the pains of teaching.

The course of instruction now offered to the consideration of this assembly, claims not the merit of originating from a master of the art, who might be thought anxious to support a peculiar theory, or to further the extension of his particular practice. It is founded on no startling paradoxes or metaphysical subtleties. It offers to all classes, in all schools, a degree of

practical skill, proportionate to the time, industry and talent devoted to its attainment. If but one step has been taken, the knowledge acquired is still not without its use in the business of life. If from any cause the career of the scholar be interrupted, he has not to indulge the useless regret, that for want of further instruction, all his past application is of no avail.

The circumstance just alluded to adapts this method to every class of public as well as of private institutions. The uses and applications of what is learned, to the *mind*, will keep pace with its uses and applications to the *purposes of life*, and to the business of instruction. The powers of conception, no less than the perceptive faculty, will be strengthened and improved. The taste will find abundant and profitable exercise, and a foundation will be laid for some discrimination in regard to the works of our meritorious—much neglected *artists*.

Note.—In the course of the lecture, a number of models and drawings, intended to exemplify the method described, were presented and explained. For several of these, the author takes pleasure in acknowledging his obligations to Mr William Mason, of Philadelphia; and to his pupils, under the instruction of that gentleman, for the remainder.

I have been thinking of you a great deal lately, and wondering how you are getting on. I hope you are well and happy. I have been very busy lately, but I have managed to find some time to write to you. I have been thinking of you a great deal lately, and wondering how you are getting on. I hope you are well and happy. I have been very busy lately, but I have managed to find some time to write to you.

MR COLBURN'S LECTURE.

THE COLLEGE OF THE HOLY TRINITY

LECTURE XI.

ON THE TEACHING OF ARITHMETIC.

BY WARREN COLBURN.

I HAVE been requested to address the Convention, on the subject of teaching arithmetic. I accepted the invitation with extreme diffidence, believing there would be many gentlemen present, much more competent to this task than myself. The subject is certainly an important one in every point of view ; whether we consider its application to the affairs of life, or its effects as a discipline of the mind, or the time which is usually devoted to it.

With regard to its application, there are very few persons, either male or female, arrived at years of discretion, who have not occasions daily to make use of arithmetic, in some form or other, in the ordinary routine of business. And the person the most ready in calculation, is much the most likely to succeed in business of any kind. As our country becomes more thickly peopled, and competition in the various branches of business becomes greater, and farther progress is made in the arts, and new arts are discovered,—knowledge of all kinds is brought into requisition ; and none more so than that of arithmetic, and the higher branches of mathematics, of which arithmetic is the foundation.

Arithmetic, when properly taught, is acknowledged by all to be very important as a discipline of the mind ; so much so, that even if it had no practical application, which should render it valuable on its own account, it would still be well worth while to bestow a considerable portion of time on it for this purpose alone. This is a very important consideration, though a secondary one, compared with its practical utility.

The fact that the study of arithmetic is allowed to occupy so large a portion of time in all our schools, shows sufficiently the degree of importance attached to the subject by all classes of people. And that it does occupy so large a portion of time, is another very strong reason for attention to the mode of teaching it, that the time may be employed to the best advantage. As the demand for all kinds of knowledge is increasing, and new branches of learning are almost daily brought within the compass of the ordinary means of education ; it becomes highly important, that those kinds, which require considerable labor for their acquirement, should be made to occupy as little time as may be consistently, without sacrificing the advantage of learning them well.

It may not seem improper here to introduce a few remarks concerning the relative advantages of the old and new systems of teaching arithmetic. For though most teachers, at the present time, prefer the new system, and the majority of the community are decidedly in favor of it ; yet there are persons, and some whose opinions are entitled to high respect, who strongly object to the new system, and give a decided preference to the old. To such we ought at least to be able to give a reason why we prefer the new system.

For this we shall appeal to facts ; they are stubborn things, and the side which they favor must prevail. It must be allowed by all, that previous to the introduction of the new system, fewer persons learned arithmetic than at present. At least, fewer made any considerable progress in it. Very few females pretended to study it at all, and the number of either sex, that advanced much beyond the four primary rules, was very

inconsiderable. And the learner was very seldom found, who could give a satisfactory reason for any operation which he performed. The study of it used to be put off to a very late period. Scholars under twelve or thirteen years of age were not considered capable of learning it ; and generally they were not capable. Many persons were obliged to leave school before they were old enough to commence the study of it.

At present, the study of arithmetic is very general with both sexes, and among all classes. It is taught to advantage even to the very youngest scholars in school, and made to fill a portion of time, which used to be left unoccupied. And most scholars now have a thorough knowledge of arithmetic at an earlier age than it used formerly to be commenced. And scholars, who cannot give a satisfactory reason for their operations, are now as rare as were formerly those who could.

But perhaps the advocate for the old system will say, I grant that it was a little more difficult, and on that very account it was a better exercise for the mind, and when it was learned, it was learned more thoroughly. But in this we shall again find the facts on our side. It cannot be pretended, that those who did not study it at all, had their minds exercised by it ; nor can much more be claimed for those who pretended to learn it. In those two classes, we have seen, was comprehended a very large proportion of the scholars. And with regard to the remainder, a very little observation will show, that the advantage is in favor of the new system. I believe most teachers who have understood and taught well, the new system, will give it as their opinion, that most scholars who have studied arithmetic well, have learned more of other things, and learned them better, than they would have done, if they had not studied arithmetic at all, or had studied it the old way. And in this class of teachers, we shall find a great number, who have been successful both on the old and new systems. It will pass for no argument at all, at the present time, for a man, however well skilled in arithmetic he

may be himself, to come forward and say, I have tried your system, and could not succeed with it at all; therefore it is good for nothing. The reply to such a one is, You have not taken the trouble to understand the system; therefore you have not given it a fair trial. And we are sure that a sufficient number of successful teachers on the new system can be produced to justify such an answer. Those who do not believe, that pupils taught by the new system, are as ready and expert in the use of figures, and in calculation generally, as those taught in the old way, have only to go into the best schools taught on the two systems, and examine for themselves. Unless they will do this, they will not be convinced; and if they do, we do not fear for the result.

We believe also that we have reason on our side, as well as facts. By the old system, the learner was presented with a rule which told him how to perform certain operations on figures, and when these were done, he would have the proper result. But no reason was given for a single step. His first application of his rule was on a set of abstract numbers, and so large that he could not reason on them, if he had been disposed to do so. And when he had got through, and obtained the result, he understood neither what it was, nor the use of it. Neither did he know that it was the proper result, but was obliged to rely wholly on the book, or more frequently on the teacher. As he began in the dark, so he continued; and the results of his calculation seemed to be obtained by some magical operation, rather than by the inductions of reason.

By the new system, the learner commences with practical examples, on which the numbers are so small that he can easily reason upon them. And the reference to sensible objects gives him an idea at once of the kind of result which he ought to produce, and suggests to him the method of proceeding necessary to obtain it. By this he is thrown immediately upon his own resources, and is compelled to exert his own powers. At the same time, he meets with no greater difficulty than he feels himself competent to overcome. In this way,

every step is accompanied with complete demonstration. Every new example increases his powers and his confidence. And most scholars soon acquire such a habit of thinking and reasoning for themselves, that they will not be satisfied with anything, which they do not understand, in any of their studies.

Instead of studying rules in the book, the reason of which he does not understand, the scholar makes his own rules ; and his rules are a generalization of his own reasoning, and in a way agreeable to his own associations.

We conclude, then, that the new system is preferable to the old. We now come to the question, What is the best mode of teaching the new system ? This is a question frequently asked, and frequently discussed. In the way that the question is usually considered, it does not admit of an answer. It may be briefly stated to be his who teaches the best. But then it will be found to be the best only in his hands. For any other teacher, another method would be better ; so that the method must be suited to the teacher ; and the teacher again, to be successful, must adapt his method to the scholar. For, until mankind are all made to think alike, and act alike, and look alike, it will be worse than useless, it will be absolutely injurious, to endeavour to make them teach alike or learn alike : I mean in the detail. For there are a few general principles, some of which I shall endeavour by and by to explain, which are applicable to all, and must be attended to by all, who wish to be successful in teaching. The best method for any particular instructor, is that by which he can teach the best. It is that, which is suited to his particular mode of thinking, to his manners, to his temper, and disposition ; and generally, also, it will be modified by the character of his school. So that if I am to give an instructor particular directions with regard to teaching, I must see him in his school, and see him teach. Then my instructions would not tend to change his manner, but to improve it, if it were faulty.

Teachers are very apt to pride themselves upon some plan, which they have discovered, for keeping up the attention of

the scholars, or of directing their attention to some important point, or of making them remember certain things, or of explaining certain difficult subjects, or of exciting emulation among their pupils, and many other things of the like kind—which, they suppose, if it were generally known and adopted, would be a great improvement;—not being aware that the thing is peculiarly adapted to themselves, and to themselves only, and that if another person were to attempt the same thing he would fail. Many have felt so much confidence in improvements of this kind, mistaking a particular case in which they have been successful for a general principle, that they have been at the pains to prepare books, adapted to those particular modes, with the greatest expectations of success. But such books always fail of general success, not because the methods were not good and successful in the authors' hands, but because others cannot enter into the spirit of them. Such books, if they are not used in precisely the way that the authors intended, cannot be used at all.

By these remarks, however, I would by no means discourage any teacher from communicating his methods to others. On the contrary, I would encourage every one to do it, whatever his methods may be. For though others should not think proper to adopt them exactly, yet they may frequently draw hints from them to improve their own. And the very fact of a teacher's giving so much attention to his own methods, as to be able to explain them to others, will be very useful to himself, and often the cause of improvement in them. But no one should feel disappointed, because others do not adopt his plans; neither should he despise the plans of others, though he does not choose to adopt them himself.

Without giving any very particular directions with regard to modes of teaching, I will state a few general principles, that will apply to almost all modes; and whoever will pursue his own mode according to them, will teach successfully. Most of them are applicable to all other subjects, as well as to arithmetic. And if, in the course of the lectures, you may have heard

them from others, or may hear them hereafter, which I dare say will be the case, they will not be injured by the repetition.

The first precept which I shall enjoin upon you, is, to teach but one thing at a time. This is a grand point in arithmetic, and in all other branches. Select the principle which you intend to teach the pupil, and apply yourself strictly and exclusively to that, until he is master of it. For as certainly as you endeavour to fix upon his mind two or more things at once, you distract his attention and blend the things together in his mind, so that he does not get a distinct idea of either; and neither of them will be learned well. In teaching any one point, therefore, all others should be kept entirely out of sight, except those which he already knows. These may be referred to at any time for illustration, or for showing the connexion. Be sure that the pupil is master of the principle before he is allowed to leave it, let it require what time it will, unless he becomes weary of it, and his mind gets confused; in which case, leave it entirely, for the present, and take it up afresh at some other time. If the learner is allowed to pass from one point to another, when the first is but partially learned, he soon acquires a habit of learning things imperfectly, which it is very difficult afterwards to break up. It begets habits of inattention, of thinking loosely and carelessly, and of not fixing anything in his mind as it should be. And if the teacher thinks to remedy this evil by constantly calling up those things, which have been poorly learned, he will find himself disappointed; for he will only confirm the habit, instead of curing it.

Almost every instructor succeeds in teaching some things, and almost every one partially fails in some things; that is, there are some things which he does not teach to his own satisfaction. If he will refer to them, he will perceive, that in those things in which he does succeed, his scholars are made thorough as they proceed; and that he is in the habit of seizing the important points, and keeping them distinct,

both in his own mind, and in the minds of his pupils. But in those things in which he does not succeed, he lets them pass from step to step, without becoming perfect in any of them, and he is probably endeavouring to make up the deficiency by a constant repetition of the things, which they have so passed. With many teachers, English grammar would be a familiar illustration of the latter mode of proceeding. The old method of teaching grammar was very faulty in this respect. The learner was first required to commit the grammar to memory, without understanding it at all, or being expected to understand it. And then he was put to parsing all parts of speech at once. Of the success of that mode many of you, I dare say, are able to judge from experience in learning, if not in teaching by it. Many persons still find the subject a difficult one to teach, and the difficulty will generally be found to arise chiefly from the fault I have been speaking of; that is, of endeavouring to teach too many things at once.

In arithmetic, this difficulty does not happen exactly in the same way, though in this it is very likely to happen. In grammar, teachers frequently endeavour purposely to teach several things at once; but in arithmetic, they do not do it intentionally. They endeavour to teach only one thing at a time; but they are in too great haste to get along, and they do not make their scholars perfect in one thing, before they let them pass to another. Hence there is necessarily a reference to what is past, while what is past is still imperfectly understood, and the scholar is kept in continual confusion.

I repeat, therefore, Teach but one thing at a time, and be sure that that one thing be learned, before another is attempted. If by mistake the scholar is found to have passed some essential point without learning it, he should be put back to it again, and be made to learn it; but on no account should he try to learn it by reference. When such a case has taken place, the scholar will show it, by failing to get his lessons; by getting into difficulties too often, and requiring

too many explanations. If it cannot readily be discovered what it is that he has neglected, he should be examined backward, until a place is found, where he meets with no difficulty, and then let him proceed from that. But it is by far the best way, that the scholar should be made thorough as he goes, and it is the only way to be successful. It is also the easiest and most expeditious.

By teaching one thing at a time, I would not be understood to mean, that the scholar should not study different subjects on the same day. It is necessary for most scholars to be attending to several subjects at the same time; for young persons cannot well be made to apply themselves to the same thing long at a time. A change therefore is necessary as a relief to the mind, and a judicious teacher will not keep his pupils upon any one exercise longer than he can keep their attention upon it.

Whatever subject you are teaching, keep this precept in view,—to teach only one point of it at once, and apply yourself strictly to that, until the learner is master of it, and then give him another. Be careful, in the selection, to choose the easiest first, and then the next easiest, and so on. And where one thing depends on another, make them follow each other as much as possible in the order of dependence. You cannot always decide, by your own judgment, what is the easiest. This must be discovered by trial on the scholars. It will often be found, that the thing which one scholar will learn the easiest first, will not be the same for another. Also, what is easiest with one teacher, will not always be so with another. Each teacher should satisfy himself, by experiment, what order he succeeds best with, and then pursue it as nearly as he can, varying only when the learner requires it. It is not always necessary to pursue the precise order of the text book. The order of the book should be followed in preference to any other, unless the teacher feels very sure that some other order succeeds better with him.

The learner should never be told directly how to perform

any operation in arithmetic. Much less should he have the operation performed for him. I know it is generally much easier for the teacher, when a scholar finds a question a little too difficult, and comes for assistance, either to solve the question for him, or tell him directly how to do it. In the old method this generally was done. Not unfrequently, the teacher took the question and solved it at home in the evening, if he could, and gave the scholar the solution the next day, to copy into his book. Now by this, generally no effect was produced on the scholar, except admiration of the *master's* skill in *ciphering*. He himself was none the wiser for it.

If the learner meets with a difficulty, the teacher, instead of telling him directly how to go on, should examine him, and endeavour to discover in what the difficulty consists; and then, if possible, remove it. Perhaps he does not fully understand the question. Then it should be explained to him. Perhaps it depends on some former principle, which he has learned, but does not readily call to mind. Then he should be put in mind of it. Perhaps it is a little too difficult. Then it should be simplified. This may be done by substituting smaller numbers, or by separating it into parts, and making a distinct question of each of the parts. Suppose the question were this: *If 8 men can do a piece of work in 12 days, how long would it take 15 men to do it?* It might be simplified by putting in smaller numbers, thus: *If 2 men can do a piece of work in 3 days, how long would it take 5 men to do it?* If this should still be found too difficult; say, *If 2 men can do a piece of work in 3 days, how long will it take 1 man to do it?* This being answered, say, *If 1 man will do it in 6 days, how long will it take 3 men to do it?* *In what time would 4 men do it?* *In what time would 5 men do it?* By degrees, in some such way as this, lead him to the original question. Some mode of this kind should always be practised; and by no means should the learner be told directly how to do it; for then the question is lost to him. For when the question is thus solved for him, he is perfectly satisfied with it,

and he will give himself no farther trouble about the mode in which it is done.

When the learner begins to require assistance too often, it is an indication that something has not been learned thoroughly. He should then go back to some place, that he does perfectly understand, and review.

All illustrations should be given by practical examples having reference to sensible objects. Most people use the reverse of this principle, and think to simplify practical examples by means of abstract ones. For instance, if you propose to a child this simple question : *George had five cents, and his father gave him three more, how many had he then?* I have found that most persons think to simplify such practical examples, by putting them into an abstract form, and saying, *How many are five and three?* But this question is already in the simplest form that it can be. The only way that it can be made easier, is to put it in smaller numbers. If the child can count, this will hardly be necessary. No explanation more simple than the question itself can be given, and none is required. The reference to sensible objects, and to the action of giving, assists the mind of the child in thinking of it, and suggests immediately what operation he must perform; and he sets himself to calculate it. He has not yet learned what the sum of those two numbers is; he is therefore obliged to calculate it, in order to answer the question; and he will require some little time to do it. Most persons, when such a question is proposed, do not observe the process going on in the child's mind; but because he does not answer immediately, they think that he does not understand it, and they begin to assist him, as they suppose, and say, *How many are five and three?* Cannot you tell how many five and three are? Now this latter question is very much more difficult for the child, than the original one. Besides, the child would not probably perceive any connexion between them. He can very easily understand, and the question itself suggests it to him better than any explanation, that the five cents and

three cents are to be counted together ; but he does not easily perceive what the abstract numbers five and three have to do with it. This is a process of generalization, which it takes children some time to learn.

In all cases, then, especially in the early stages, it will be perplexing, and rather injurious, to refer the learner from a practical to an abstract question, for the purpose of explanation. And it is still worse to tell him the result, and not make him find it himself. If the question is sufficiently simple, he will solve it. And he should be allowed time to do it, and not be perplexed with questions or interruptions until he has done it. But if he does not solve the question, it will be because he does not fully comprehend it. And if he cannot be made to comprehend it, the question should be varied, either by varying the numbers, or the objects, or both, until a question is made that he can answer. One being found that he can answer, another should be made a little varied, and then another, and so on, till he is brought back to the one first proposed. It will be better that the question remain unanswered, than that the child be told the answer, or assisted in the operation, any farther than may be necessary to make him fully understand the question.

Some children, when a question is proposed, instead of thinking of it, and trying to solve it, will endeavour to guess at the result. This should be checked immediately.

It has often been asked whether the plates, which sometimes accompany Colburn's Intellectual Arithmetic, or anything else of a similar nature, are of any use to the learner ? I think myself that they have very little effect upon his progress. At first, before he is familiar with the addition and multiplication tables, some kind of counters seem to be necessary ; but it is not important what they are. The plates are very convenient, but I believe the fingers do about as well as anything. If the scholar is allowed any helps of this kind, he should be left to manage them entirely by himself, and in his own way. Any helps, by which the work is partly done for the scholar, are certainly injurious. It is by his own efforts, that a child

is to learn, if he learns at all. The teacher cannot learn for him. Neither will he labor himself, if the teacher will endeavour to do the work for him. You might, with as much propriety, expect that his muscles would be strengthened by seeing others exercise in the gymnasium, as to expect a child's mind to be strengthened and improved, when the teacher does the work for him. The teacher may assist him in understanding the question, but not in the operation,—not even in arranging his counters ; for to do this, is to do for him the most important part of the solution.

It is best that the learner should be exercised for some time in solving practical questions involving addition and multiplication, before he commits to memory the addition and multiplication tables. He should understand the use of them, and be able to make them, before he is required to learn them, and then he should be made to learn them thoroughly. It is not well for a child to commit anything to memory, that he does not understand, for he thereby acquires a habit of repeating it without attending to the sense ; and it is more difficult to make him attend to the sense afterwards, when he repeats it, than if he had not seen it before. At least, this is generally the case. There may be exceptions. I might refer again to the subject of grammar, as furnishing the most familiar instance of this. For example, it is very easy for a scholar, when properly taught, to learn the distinction of cases in the pronouns. And yet I have had scholars, who had learned their grammar before they came under my care, so as to repeat it by heart, in parsing the word *him*, call it in the nominative case ; and still persist in calling it so, after being required to decline it, five or six times in succession. Arithmetic, or any other subject, would furnish examples enough of the difficulty of making the scholars attend to the sense sufficiently to understand a rule or principle, when they have first committed it without understanding it. But grammar, perhaps, affords the most striking instances of it.

I shall now endeavour to explain a principle, which I con-

sider to be a very important one. It is one less generally understood than any that I have mentioned, or shall mention. Many teachers have practised upon it very well without having particularly thought of it. Many of you, I presume, have both thought of it, and practised upon it. But there are many, who do not observe it, either in theory or practice. This principle depends on the association of ideas. I shall not enter here into a discussion of the principle of association. I leave it to the metaphysician to determine whether there are any general laws which regulate it or not. I shall confine myself to one simple matter of fact concerning it, and the practical consequences to be derived from it.

The fact is this, that two persons never have exactly the same associations of ideas. I mean, they never associate their ideas in exactly the same order. The consequence is, that no two persons think of the same proposition alike. Hence, a proposition expressed in certain terms, may be very clear and intelligible to one person, and very obscure or altogether unintelligible to another. And perhaps, with a very slight change of terms, the case would be entirely changed. It would be intelligible to the latter, and unintelligible to the former. An explanation, which is very clear and lucid to one, will often convey no idea at all to another. When a proposition is made for two persons to reason upon, they will often take it up and manage it very differently in their minds. When the subject is such as to admit of demonstration, as is the case with mathematics, they will generally come to the same conclusions. But on other subjects their conclusions will sometimes agree, and sometimes not.

There are several practical results to be derived from this. First, it is very important that a teacher should be able readily to trace, not only his own associations, but those of all his pupils, when he hears them recite their lessons. When a proposition or question is made to a scholar, he ought to be able to discover at once, whether the scholar understands it or not. If he does not understand it, the teacher should be able to

discover the reason why, and then he can apply the remedy. This is to be done only by questioning the scholar, and tracing his associations, and finding what he is thinking about, and how he is thinking about it. Without doing this, the teacher is as likely to perplex the scholar, as to assist him by his explanations. And it is a very common thing to see scholars perplexed in this way.

Secondly, when the scholar does not understand the question or proposition, he should be allowed to reason upon it in his own way, and agreeably to his own associations. Whether his way is the best, or not, on the whole, it is the best way for him at first, and he ought by no means to be interrupted in it, or forced out of it. The judicious teacher will leave him to manage it entirely by himself, and in his own way, if he can. Or if he meets with a little difficulty, but is still in a way that will lead to a proper result, he will apply his aid so as to keep him in his own way. When the scholar has been through the process in his own way, he should be made to explain how he has done it; and if he has not proceeded by the best way, he should be led by degrees into the best way. Many teachers seem not to know that there is more than one way to do a thing, or think of a thing; and if they find a scholar pursuing a method different from their own, they suppose of course he must be wrong, and they check him at once, and endeavour to force him into their way, whether he understands it or not. If such teachers would have patience to listen to their scholars, and examine their operations, they would frequently discover very good ways that had never occurred to them before. Nothing is more discouraging to scholars, than to interrupt them, when they are proceeding by a method which they perfectly comprehend, and which they know to be right; and to endeavour to force them into one which they do not understand, and which is not agreeable to their way of thinking. And nothing gives scholars so much confidence in their own powers, and stimulates them so much

to use their own efforts, as to allow them to pursue their own methods, and to encourage them in them.

It is very important for teachers to lead their scholars into the habit of attending to the process going on in their own minds, while solving questions ; and of explaining how they solve them. Unless the teacher possesses the faculty of tracing the associations of others, he cannot make them do it effectually. But the teacher, who does possess this faculty perfectly, will get an explanation out of anybody that has any thoughts, and can be made to speak on the subject upon which he is questioned. He can take one of his scholars, or any other person, and make him trace out and explain a process of reasoning, which has passed in his mind, but of which he was not at all aware, and concerning which, if left to himself, he could give no account. He seems to have the thoughts of his scholars under his control. He will not only find out *what* they are thinking about, and *how* they are thinking of it, but he is able to turn their thoughts into almost any channel he pleases. And it is next to impossible for one person to direct the current of another's thoughts on any subject, unless he knows the channel in which they are already flowing.

This subject also suggests a hint with regard to making books, and especially those for children. The author should endeavour to instruct, by furnishing the learner with occasions for thinking, and exercising his own reasoning powers, and he should not endeavour to think and reason for him. It is often very well, that there should be a regular course of reasoning in the book on the subject taught ; but the learner ought not to be compelled to pursue it, if it can possibly be avoided, until he has examined the subject and come to a conclusion in his own way. Then it is well for him to follow the reasoning of others, and see how they think of it.

I will now say a few words concerning recitations. They are of very great importance in instruction, in a great many points of view ; and it is very essential that they be well con-

ducted. They are the principal means, which the teacher has, to know what progress the scholars are making. It is chiefly at recitations that one scholar can compare himself with another; consequently they furnish the most effectual means of promoting emulation. They are an excellent exercise for the scholar, for forming the habit of expressing his ideas properly and readily. The scholar will be likely to learn his lesson more thoroughly, when he knows he shall be called upon to explain it. They give him an opportunity to discover whether he understands his subject fully or not, which he will not always be sure of, until he is called upon to give an account of it. Recitations in arithmetic, when properly conducted, produce a habit of quick and ready reckoning on the spur of the occasion, which can be produced in no other way, except in the business of life; and then only, when the business is of a kind to require constant practice. They are therefore a great help in preparing scholars for business.

Directions concerning recitations must be general. Each teacher must manage the detail of them in his own way.

In the first place, the scholar should be thoroughly prepared before he attempts to recite. No lessons should be received by the teacher, that are not well learned. If this is not insisted on, the scholar will soon become careless and inattentive.

It is best that the recitations, both in intellectual and written arithmetic, should be in classes, when practicable. It is best that they should be without the book, and that the scholar should perform the examples from hearing them read by the teacher. Questions that are put out to be solved at the recitation, should be solved at the recitation, and not answered from memory. The scholars should frequently be required to explain fully, and clearly, the steps by which they solve a question, and the reasons for them. Recitations should be conducted briskly, and not suffered to lag and become dull. The attention of every scholar should be kept on the subject, if possible, so that all shall hear everything that is said. For this, it is necessary that the questions pass round

quickly, and that no scholar be allowed a longer time to think than is absolutely necessary. If the lesson is prepared as it should be, it will not take the scholar long to give his answer. It is not well to ask one scholar too many questions at a time ; for by that, there is danger of losing the attention of the rest. It is a good plan, when practicable, so to manage the recitation, that every scholar shall endeavour to solve each question that is proposed for solution at the time of recitation. This may sometimes be done, by proposing the question without letting it be known who is to answer it, until all have had time to solve it ; and then calling upon some one for the answer. No farther time should be allowed for the solution ; but if the scholar so called on is not ready, the question should be immediately put to another in the same manner.

There is one point more which I shall urge, and it is one which I consider the most important of all. It is to make the scholars study. I can give no directions how to do it. Each teacher must do it in his own way, if he does it at all. He who succeeds in making his scholars study, will succeed in making them learn ; whether he does it by punishing, or hiring, or persuading, or by exciting emulation, or by making the studies so interesting that they do it for the love of it. It is useless for me to say which will produce the best effects upon the scholars ; each of you may judge of that for yourselves. But this I say, that he who makes his scholars study, will make them learn ; and he who does not, will not make them learn much or well. There never has been found a royal road to learning of any kind, and I presume there never will be. Or if there should be, I may venture to say, that learning so obtained will not be worth the having. It is a law of our nature, and a wise one too, that nothing truly valuable can be obtained without labor. There are some facilities for learning at the present day, perhaps, which were not formerly known. These serve to render study less irksome, but they do not render it less necessary. They enable the scholar to obtain more knowledge with an equal

quantity of labor, but they do not enable him to obtain any valuable knowledge without labor. If scholars were to learn wholly by the assistance of the teacher, without any efforts of their own, they would acquire habits of idleness and inactivity, which would be more injurious to them than their learning would be beneficial ; and they would be little able to make any progress in learning after leaving school. But the scholar, who is made to apply himself closely, and to learn by his own efforts, acquires habits of diligence and perseverance which will be useful to him through life. And he learns (which is of more advantage than the immediate subject of his studies,) he learns how to learn by his own efforts, without the aid of a teacher.

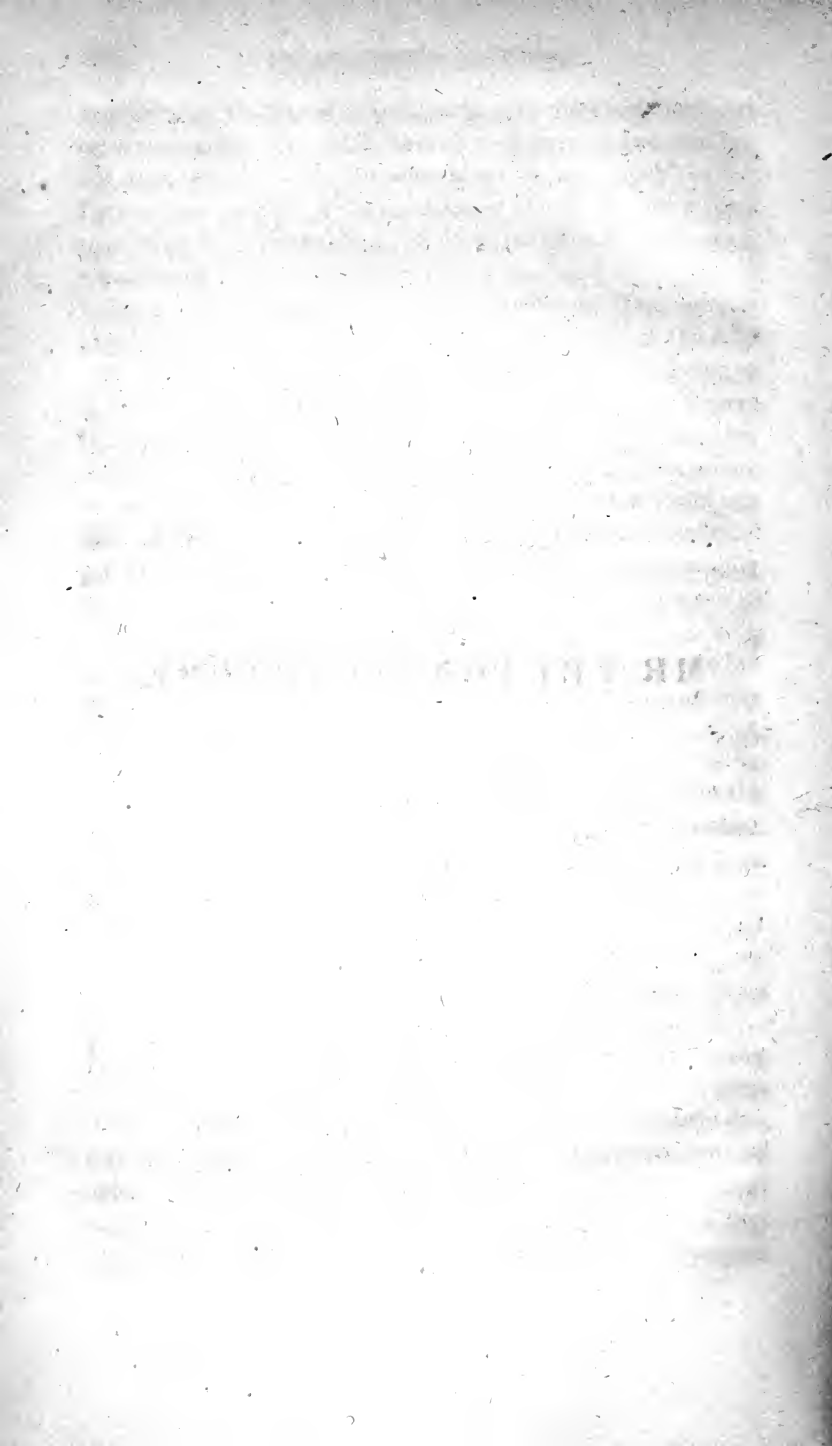
I have now briefly noticed what I consider the essential points to be attended to in teaching arithmetic. Many of them, as I observed before, are not peculiar to arithmetic, but apply equally to all subjects. And I dare say you will hear some of them much more ably discussed during the course. But there are many essential points of a good instructor, that cannot be taught by lecture. This I will not undertake to describe. One point more, however, I will remark ; that to teach a subject well, it is necessary for the teacher to understand it well himself, and to take an interest in it ; otherwise he will not make it interesting to his scholars.

Allow me to close with a few remarks, expressing, though imperfectly, the interest I feel in the occasion that has brought us together. There have been, in every age, a few persons, who have felt the importance of the subject of education. But generally the numbers have been few. The business of teaching, except in great seminaries, has not been considered as one of the most honorable occupations, but rather degraded ; so that few persons of talents would engage in it. Even in our own country and age, it has been too much the case, that persons with a little learning, and unwilling to work, and unfit for anything else, have turned schoolmasters, and have been encouraged in it. They have been encouraged

in it, because the pay of school teachers, in most instances, has been just sufficient to obtain that class of persons, and no other but one, which, with few exceptions, is not much better. I mean such as engage in the business of teaching for a short time, in order to discharge a few debts, previous to entering on a profession.

But a new era, I trust, is now opened upon us. The community at large are beginning to feel the importance of the subject, and to show an interest in it. The fact of there being so many persons, both teachers and others, and many of them from distant parts of the country, collected here on this occasion, is a sufficient proof that the interest is neither small, nor confined to one section of the country. A few years ago it would have been impossible to assemble such a number of persons for such a purpose. It seems now to be generally agreed that the business of teaching ought to be considered as a profession; and that the persons engaging in it ought to be instructed expressly for it, as for a profession. And institutions are getting up for that purpose. Your assembling here in this way, for mutual instruction on this important subject, though it will not supply the place of regular institutions for it, will greatly promote the general object, and hasten on the period of their adoption. I rejoice, therefore, to see this meeting. Though at present engaged in a pursuit very different from yours, I cheerfully accepted the proposals to deliver a lecture before you; not because I felt that I could do the subject justice, but because I was glad of the opportunity of contributing my mite, however small, to the promotion of so great a cause. I hope, therefore, that you will improve the opportunity you now have of receiving and communicating information, and that you will lay the foundation of a great work, of which not only your own immediate neighbourhoods, but our country at large, and not our country only, but the whole world, shall feel the influence.

MR FELTON'S LECTURE.



ADVERTISEMENT.

THE author of the following lecture, yielded with reluctance to the request of the Censors, that he would furnish a copy for the press. The subjoined letter will show that it was only his own feeling of the inadequacy of what he has said in this lecture, to express his views of the greatness and importance of classical studies, which prevented his consenting as cheerfully to its publication, as he had to delivering it before the Convention.

TO THE CENSORS OF THE AMERICAN INSTITUTE.

GENTLEMEN,

THE lecture which I now submit to your disposal, was not written with any view to publication, and I have therefore hesitated to send it to the press. The subject of classical learning is one of immense importance, when considered in all its bearings upon the intellectual culture of our times. It is impossible to do it anything like justice within the short compass of a single discourse; and I have not attempted it. The preeminent merits of the great productions of antiquity, when considered merely as works of original and creative genius; the fine, graceful, airy, intellectual finishing they received from the hands of their unrivalled authors; the intimate union of the classical taste, with all the best literature of succeeding times—with many other details, into which the argument for classical learning, in the present state of the literary world, must necessarily run, demand a wider space and more minuteness of discussion, than would be compatible with the purpose of a public discourse. On this account, I indulged in a rapid grouping of topics, a superficial and hurried series of sketchings, with as much of 'special pleading' as the occasion permitted; intending to correct these faults in a more extended work, for which I have been some time past collecting materials. It was my purpose to mould these materials into a volume of moderate compass, and submit it, at some

LETTER.

future period, to the American Institute. That purpose I still retain ; on which account I ask the indulgence of my readers for the obvious imperfections of the present lecture. Meantime, I beg leave to recommend to all interested in the subject of classical learning, an admirable 'Introduction' to the classics, by Mr Coleridge, a gentleman of kindred genius to his great poetical namesake. His work does not pretend to a full and philosophical exhibition of the claims of classical learning, as a leading object in a system of liberal education. But it is a tasteful disquisition on the characteristics of some of the elder Grecian writers, and proves that its author possesses, in a liberal measure, the spirit of noble and generous scholarship.

I am, gentlemen, with sincere respect,

Your obedient servant,

CORNELIUS C. FELTON.

LECTURE XII.

ON

CLASSICAL LEARNING.

BY CORNELIUS C. FELTON,

TUTOR IN GREEK, IN HARVARD UNIVERSITY, CAMBRIDGE.

IN discussing the claims of classical learning, it is not my intention to revive the half-forgotten disputes in which the scholars of old arrayed themselves in contending parties, under the banners of ancient and of modern genius. The spirit which animated those violent times, is foreign from an occasion like the present. The fanaticism which taught men to abuse and scorn each other for differences in literary opinion, and woman, in the person of a fair votary of the Muses, the only one of her sex whom the French Academy has ever deigned to eulogize, to fix upon her opponent, Lamothe, because he ridiculed Homer's mythology, the gentle epithets 'cold, flat, ridiculous, impertinent, grossly ignorant, proud and senseless,' and to remind him that Alcibiades boxed the ears of a rhetorician, because he had not Homer's works; this absurd fanaticism, it is far from my purpose to evoke. Yet it might well be matter of surprise, that the great masters of antiquity, whose works have stood the test of two thousand years, should, at this late day, be summoned before the tribunal of public opinion, their merits closely scrutinized, questioned, doubted, and, in some cases, passionately disputed. It might, I say, be mat-

ter of surprise, had we not all observed and felt the revolutionary character of the present age. There has been, for years past, a strong tendency to overturn old systems, however hallowed; to dispute old opinions, however established by the lapse of ages; and to carry the work of revolution and reform from the halls of legislation to the halls of learning. These stirring movements of the awakened and excited mind, have doubtless swept away many systems and theories that had their origin in an age of darkness, and were unfit for an age of light. They have taught men to examine, compare, think, decide and act for themselves. But it becomes a momentous inquiry for us, who are in the very vortex of the troubled waters, whether there is not great danger, as well as advantage, in our present situation; whether we may not, in the giddy whirl, neglect too much the old land-marks, and make shipwreck on the ocean of change.

The adversaries of classical learning assert, that 'the main reason for giving such importance to the ancient masters, in a course of liberal education, was, in former times, the fact that they were the only teachers. The moderns had not yet begun that series of researches and discoveries, which have been so splendidly exhibited in these latter days. The physical, moral, intellectual sciences were unknown, save as the sages of the Academy and the Porch had taught them. The genius of modern poetry was voiceless, or breathed only harsh strains in the barbarous Latinity of the Monks. It was therefore correct and proper that recourse should be had to their instructions, for want of better. But now the case is widely different; the tables are turned. The ancients were not wiser than we are, but we are wiser than they. We have carried on and perfected what they only began. They might have been giants, we grant, and we may be pigmies; but then we have the advantage of being upon their shoulders, and of course see farther. Shall we then continue to look with their eyes?' Such is the reasoning of the more moderate and rational among the opposers of classical learning.

Others have entered into the controversy with a spirit of violence and denunciation, altogether unbecoming gentlemen and scholars. The advocates of classical learning have been held up to the ridicule of the public as the bigoted adherents to a useless and cumbrous system, because they are too idle and selfish to admit the lights of modern improvement. They have been charged with palming off upon the world a cheap and trifling stock of words, a parade of verbal niceties, for the genuine learning which is to prepare young men to act their parts well in the great drama of life. A tone of bitterness, a rancor like that of personal hostility and family quarrels, has assailed them, and the whole armory of sarcasm has been exhausted. But denunciation and anathema are not to be reasoned with,—‘and who can refute a sneer?’ It often happens, we well know, that the most violent are the most ignorant. Men have derided the wit and wisdom of antiquity, who are unable to explain a classical allusion, or interpret a Latin sentence. Smatterers have assailed the reputation and denounced the writings of the mightiest of Grecian philosophers, to whom the curious inquirers into the mysteries of the Greek alphabet, would turn in vain for light. And yet the opinions of such men, unworthy as they are of confidence, derive from their impudent assurance, an authority against which reason, and good sense, and sound learning, are for a time of little avail. But the calm and rational skeptics have stated their questions, and deserve a reply. An exposition of the claims that classical learning still maintains upon our attention and respect, will contain that reply. Few, I believe, who reflect upon the prospect of our country, can doubt the importance of the question being candidly asked and candidly answered. A nation, embracing more than twelve millions of men, irresponsible to any higher power than themselves, with their own destinies, whether for good or for evil, in their hands, each generation training up those who are to succeed them in the high and perilous trust, has a deep, and almost overwhelming stake in the chance of success or ruin, and the means of securing the one or averting the other.

Much wit has been expended in ridiculing the pursuits of the philologist. But true philosophy regards every manifestation of mind, whether in the forms of language, the creations of poetry, the abstractions of science, or the godlike gift of oratory, as worthy of its study. The mind, the essential and immortal part of man, is not to be contemned in any one of its thousand fold aspects and operations. Among the most curious and subtile of these operations, the process unfolded by the developement of speech may fairly be classed. This gift, so universal, so indispensable, like the air we breathe, is scarcely valued because its loss is rarely felt. But let us reflect a moment upon its infinite importance, and we cannot, with anything like the spirit of true philosophy, scorn its study, as a puerile and trifling object. That power by which all other powers are guided and fashioned, by which all emotions are described, by which all the playful efforts of fancy are made distinct to the perceptions of others, by which, more than by all our powers besides, the creations of genius are illustrated—and *language* the instrument of that power, the most ingenious and finished of all instruments—can it indeed be so small, so contemptible, as to fix justly upon those engaged in its study the scornful epithets of ‘word-weighers,’ and ‘gerund-grinders?’ Language opens a wide and curious field to the observation of those whose pursuits lead them to trace the intricate phenomena of intellect. The great difficulty in studying the philosophy of mind, arises from the impalpable nature of the objects to be scanned in that study. Language is one of the modes, and a most essential one, by which the operations of intellect are distinctly made visible. In studying language, therefore, we are in fact studying *mind*, through the agency of its most purely intellectual instrument. In mastering language, we not only attain the power of wielding this most efficient instrument, but we make ourselves familiar with the results, and we comprehend the compass of those gifts which make us feel that we are ‘fearfully and wonderfully made.’ Such pursuits can have no other tendency than to

strengthen and elevate the mind, and prepare it, consequently, to act with energy, dignity and success, upon the various objects presented to it in life. But it is said, the student of language is employed about *words* to the neglect of *things*. I cannot help calling such reasoning, or rather such assertions, for it is not reasoning, poor, unmeaning cant. Wasting time upon *words* to the neglect of *things*! Are not words, realities? Have they not a separate, an independent existence? Nay, more; have they not a power to stir up the soul, to sway nations even, such as no other *things* ever possessed or ever can possess? Did not the words of Demosthenes carry more dread to the heart of Philip than the arms of Athens and the fortresses of her tributary cities? Have not the words of Homer touched the hearts and roused the imaginations of myriads, many centuries since the walls of Troy and the armaments of Greece perished from the face of the earth, and the site of Priam's capital was lost from the memories of men?—It is true that the trifling and quibbling of some philologists give a plausible air to the objections raised against these studies. But would you condemn the mathematics, because one votary of the science declared his contempt for *Paradise Lost*—a work which proved no truth by a chain of geometrical or algebraic reasoning? Would you reject geology, because an enthusiast values a stone, apparently worthless, more than a splendid product of imagination? Would you shut your mind against the beautiful science of botany, because you have seen one so absorbed in its study that he would expend more anxious care in rearing a puny hot-house plant, than in alleviating sorrow or saving life? Are you prepared to throw away the hopes of religion, because a few bigots, attaching an overstrained importance to trifles, make it appear absurd, and strip it of almost every attribute that can command your respect? Analogy, I am aware, is not argument; but the same kind of reasoning, which is aimed at philological studies, might be aimed with equal success against every science we value, every truth we hold sacred.

Such are some of the general considerations that recommend the study of language. But the classical languages, besides these, have other and peculiar claims upon our attention. No one will for a moment dispute the importance of understanding the full power of our vernacular tongue. I assume this as a fact beyond discussion and argument. I assert, moreover, the impossibility of doing this without the aid of Greek and Latin. This latter position may be, and has been, disputed. It has been assumed a thousand times as an argument in support of classical learning, and a thousand times its force and pertinency have been denied. The case may, however, be stated briefly, and, as I think, convincingly. The progress of language, at least as far back as *written* language extends, may be traced with no great difficulty. We know not of what elements the Hebrew tongue was formed. It is the earliest and simplest language that we have the means of examining in written records. But we can easily trace the radical signification of many Greek words, to Hebrew forms; and the influence of one of these languages upon its successor, is as clearly perceptible as any phenomenon in physical science. And though a general knowledge of Greek, and one sufficient for all ordinary purposes, may be obtained without going higher than itself into the antiquity of speech, yet it is perfectly obvious that a thoroughly critical acquaintance with it can be purchased only at the price of resorting to the subsidiary dialects. The Latin was formed chiefly from a modification of Greek. The Romans drew largely from Grecian fountains, both in language and literature; and vain would be his labors, who should essay to comprehend the efforts of Roman genius, without first listening to the instructions of Rome's literary masters.

In the division of the Roman empire and the formation of modern states, other languages arose from the ruins of the Latin. Four of the principal dialects of modern Europe bear so strong a resemblance to the parent tongue, that a knowledge of the latter makes the attainment of the former an affair of tri-

fling labor. Other languages of Europe, and our own among the rest, are derived but in part from the Latin; and I assert that so far as that part goes, a knowledge of Latin is essential to one who would understand it fully, and wield it with certainty and effect. Nearly all our words of Roman origin retain the radical meaning of their primitives. Their general import may, it is true, be gathered from English usage; but the peculiar, the nicely critical propriety of their application, is unknown, save to the classical scholar; and all others, who attempt to write their own mother tongue, especially in the discussion of literary subjects, are liable to mar their pages by slight inaccuracies of style, and inaccuracies in the use of single words, which destroy their claim to the honor of being classical models of composition. Such is the inevitable result of the natural progress of the human mind. Had we lived in the times of the ancients, and they in ours, the case would have been reversed. They would have drawn instruction from our writings; their languages would have received an infusion from ours; and to learn the exact quality of that infusion, they must have traced it to its fountain head with us. We do not compromise one particle of our claim to originality, by admitting the necessity of resorting to ancient tongues, in order to learn our own. It is only admitting, in the spirit of philosophy, what the natural course of human thought, and our relative position to the great civilized nations who have gone before us, make it incumbent on us, as reasoning men to admit. Perhaps the exceptions may be urged of such men as Franklin, who have written our language in great purity and elegance, without having been trained in the discipline of classical schools. If I grant that these apparent exceptions are exceptions in fact, I might defend my position by the plea, that a few exceptions never invalidate a general rule; and I might array in reply to every single exception, five hundred examples in which the rule holds good. But there is little argument to be drawn from the literary powers of Dr Franklin, against the utility of classical learning. According to his own statements,

his style was formed by closely imitating the best models of English composition—the papers of the Spectator—which, we all know, are from the pens of the most accomplished classical scholars England has ever produced. The purity, simplicity and beauty of Dr Franklin's style, therefore, is, after all, the consequence of an exquisite taste in ancient literature ; although with him, it comes at second hand. Is any one prepared to say that the language of Franklin would not have been more bold, more stirring, more eloquent, had his mind, after having been cultivated and refined in the study of antiquity, given free scope to its acknowledged powers, and acted by its own resistless impulses, untrammelled by the fetters of imitation ?

Not only our language, but our literature, is closely dependent on the classical. The fine conceptions, the productions of the beautiful fancy of the ancients, have exerted so strong an influence upon the tone and genius of the elder English literature, that one half of the beauties of the latter are lost sight of without a knowledge of the former. The great writers of England have been filled to overflowing with classic lore. The history, and poetry, and oratory of Greece and Rome, have lent them their tributary aids ; the sages of antiquity have poured out their richest treasures to illustrate, adorn, and enforce the glorious conceptions of English intellect. Classical allusions and illustrations, tastefully employed, are enchanting to a cultivated mind. In English literature they are used with a skill and beauty that form one of its most delightful traits. This does not arise from, nor does it argue, a want of originality. It would be impossible to prevent such influences of the literature of one age upon that of another, except by entire ignorance of everything that does not come within our own experience. We may complain of it, if we please, but we cannot change the order of time, and place ourselves at the beginning of the history of our race. The ancients were before us, and we have studied them, and cannot help it. We cannot read our own writers, without being constantly remind-

ed of those great men. The law of progress requires that it should be so. As well might you attempt to throw up a dyke against the fountain-heads of a mighty river, and expect it to flow uninterruptedly on to the ocean, as to dam up the channels of thought, and hope to force the mind onward in the career of improvement.

Fortunate, indeed, is it for us, that the creations of Grecian genius were guided by such unerring taste. The intellectual character of that gifted nation was formed under the happiest auspices. Nature was lavish of her beauties upon her favored land ; but she did not convert it into a region of oriental softness. Every influence that tended to give refinement and elegance to the mind, was there felt ; but refinement and elegance were made to stop at the proper limits, and never allowed to become degenerate and effeminate. Her free and oft-times tumultuous politics gave energy, her matchless climate infused vivacity and cheerfulness, her scenery inspired a pure taste and an exquisite perception of beauty. The human form was developed in its fairest proportions. The majestic and intellectual head, the finely expanded frame, the active and airy and graceful motion, gave to artists the prototypes of their chiselled gods. Add to this their beautiful modes of instruction ; music and science uniting to give at once a humanized and manly tone to the character, in the groves of the Academy, on the places of public resort, by the wisest, best, and most eloquent from among them, with the noblest specimens of art all around them, the marble almost waking into life, the canvass glowing with the hues of heaven—and we cannot wonder at the perfection of Grecian taste ;—we cannot but congratulate ourselves, that a race so favored, so gifted, were called to preside over the beginnings and direct the destinies of intellectual Europe,—that the Genius of Greece yet lives, as fresh, as bright, as beautiful, as her own blue hills, sunny skies, and green isles.

Another additional consideration in favor of the study of ancient languages, is the fact that they are more finished than

any others. The perfection of the Greek tongue has always been the admiration of scholars. Its flexibility, its exhaustless vocabulary, its power of increasing that vocabulary at will by the use of compounds, make it an admirable vehicle for the communication of thought, even to the nicest shades ; while its unrivalled harmony imparts to poetry a richness and beauty beyond the capacity of any modern tongue. The principles and power of language are here more fully unfolded ; the philosophy of rhetoric is more thoroughly displayed. Add to this, the Greek grammar is now fixed and settled. There it is, beyond the reach of change, an object of study, to be resorted to at any time—ever perfect, ever beautiful. But beyond and above the study of mere language, I know of no better intellectual discipline than to determine the meaning of an ancient author. The principles of grammar are to be applied by the reason and the judgment ; the situation of the author must be vividly presented to the mind by the memory and the imagination ; the connexion of the passage in question with the context, is to be closely scrutinized ; the style of ancient thought to be taken into consideration, and, after thus exercising the most important of our powers, the purport of a difficult passage may be settled. This is precisely the course of reflection and reasoning which men must follow, in determining the proper conduct for many difficult conjunctures in life ;—it is acting upon probabilities.

Such is the process, and such the discipline, of determining single passages. Of a similar and more elevated kind, is the intellectual effort of comprehending the entire worth of an author. It is not enough barely to give his works a hasty perusal, or even a careful perusal, with a knowledge of the language simply. The student who would enter fully into the merits of a classical author, must take himself out of the influences immediately around him ; must transport himself back to a remote age ; must lay aside the associations most familiar to him ; must forget his country, his prejudices, his superior light, and place himself upon a level with the intellect

whose labors he essays to comprehend. Few are the minds that would not be benefited by such a process. We are disposed to permit our thoughts and feelings to repose too much upon the objects nearest us; and thus a constant reference to self becomes the habitual direction of our thoughts. What was the character of the age in which he lived? what was the religion? how far did it gain a hold upon the minds of cultivated men? to what extent did it influence the tone of poetry? what were the philosophical theories, and how far were they true, and how extensively were they believed? what was the character of the nation, and what had been its historical career? what was the state of political parties and what was the government? what were the doctrines held by each, and wherein did they differ—and how far was the individual mind of the author in question wrought upon by all these influences? are questions which should be asked, and, as far as possible, answered, by the scholar who would do himself and literature full justice, by the mode in which he pursues his classical studies. I am aware that such is not often the path followed by the scholars of our country; but I do sincerely believe that the worth of classical learning will never be realized until some such method is adopted. I know, too, it involves a depth of thought and a wide range of studies, from which we are apt to shrink in alarm, and ask ourselves if there is not some shorter way to attain the object; but reason, as I think, decides without appeal, that such is the price of genuine classical erudition.

Knowledge of the sort I have described, may not lead to the invention of a single new mechanical agent; it may not be the direct means of increasing our fortunes a single dollar. But it will give us an enlarged view of our nature; it will disclose the workings of our common powers under influences widely differing from any that have acted upon ourselves; it will teach us to judge charitably of others' minds and hearts; it will teach us that intellect, and sensibility, and genius, have existed beyond the narrow circle in which we have moved—

beyond the limits of our country—centuries before our age. Such lessons are needed in the every day concerns of life. Those who say that the classics are of no practical use—those even who say that they are merely ornamental in a liberal education, show an entire forgetfulness of their most striking and obvious effects. They are eminently practical. They require the most practical modes of reasoning to comprehend them; they give the most practical views of our nature; they prepare the professional man for his labors, by presenting a field of practically similar labor, before he enters upon its special duties. I have no hesitation in asserting, that a mind long trained in unfolding the meaning and worth of classical authors, by the course of inquiries I have described, will be eminently prepared for the intricate investigations of the profession of law.

I repeat again the qualification which must be made to these remarks, when applied to the classical studies common in our own country. We take them up, with little knowledge of ancient history, and none of mythology; we hurry through them, with or without a grammatical knowledge of the languages, as chance or caprice may direct; we bring them to the standard of modern tastes, and refer them to our own tribunals. Instead of transporting ourselves back to the time when they lived, we summon their Shades to appear before us,—differing in every respect from them, differing in religion, differing in morality, differing in prejudices—to answer for opinions and systems, put forth ages and ages before our own opinions and systems were thought of. Such is not doing the justice we owe them.

But apart from all other considerations, the merits of ancient literature, as judged by *any* standard, entitle it to a high place in every system of education. My remarks apply chiefly to Greek literature, because it is not only the most exquisitely finished, but the fountain-head of the Roman and of all successive literature. I have already spoken in general terms of the circumstances which tended to give the Genius of Greece its unrivalled taste. If that high culture is more fully

displayed in any one portion of Greek literature than in the rest, that portion is their poetry. From the first book of Homer to the last play of Euripides, the train of noble conceptions, exquisite expression, and matchless imagery, betrays the peculiar and unrivalled intellect of the finest masters in the art. It would be too much like the hundredth repetition of common-places to enlarge upon the noble character of Homer's poems ;—

*Qui, quid sit pulchrum, quid turpe, quid utile, quid non,
Planus ac melius, Chrysippo et Crantore dicit.*

But I cannot forbear quoting the opinions of an illustrious German critic. 'The influence which the works and the genius of Homer have of themselves produced on after ages, or rather, indeed, on the general character and improvement of the human race, has alone been far more durable, and far more extensive, than the combined efforts of all the institutions of the Athenian, and all the heroic deeds and transcendent victories of the Macedonian. In truth, if Solon and Alexander still continue to be glorious and immortal names, their glory and immortality are to be traced rather to the influence which, by certain accidents, their genius has exerted on the intellectual character and progress of the species, than to the intrinsic value of a system of municipal laws, altogether discrepant from our own, or to the establishment of a few dynasties, which have long since passed away.'

Greek poetry is abundant in every department of the art. But if I were to select a part more worthy than the rest to be cultivated by an intellectual man, that would be the drama. This most singular and beautiful manifestation of Grecian genius, was favored by every circumstance that could make it purely and intensely national. The vivacity and inquisitiveness of the Athenians, their enthusiastic love of the arts and of poetry, rendered the drama an object in which the proudest spirits aspired for distinction. The Greek tragedies have, accordingly, been esteemed among literary men as the most interesting and valuable remains of ancient poetry ; and this feel-

ing of admiration has, among some modern nations, been carried to such a pitch of extravagance, that the expression of true, genuine, rational and modern feeling has been made to give place in literature, to a cold and heartless imitation, both of the classical style in language, and of the classical style in thought. But it may easily be shown, that the same principles of good taste which guided the ancients, should also teach modern nations to comply with the genius of the age.

To understand the Greek drama fully, we must not only ascertain the spirit of the people and the light in which they regarded it, but a minute acquaintance with the architectural construction of the theatre, and the scenic details, is absolutely necessary. It is impossible to gain from ancient authors all on this subject which may be desired ; but a careful perusal of Vitruvius, with the proper explanations, will throw much light on this part of Grecian learning. The beauty of their climate enabled the Greeks to enjoy theatrical amusements with no roof above them but the sky. It seemed singularly appropriate, that representations in which the gods and heroes of their mythology bore so distinguished a part, should be held beneath the broad canopy of the heavens. The great interest felt in dramatic exhibitions, and the grave importance they attached to them, called the whole people, or as large a portion of the people as attended any public occasion, into the theatres ; which therefore must have been of prodigious size. Indeed, it was to a certain extent a religious ceremony—an exhibition in honor of the divinities to whom, in a half poetical, half religious sense, they paid their adoration.

The character of the Greek tragedy is elevated high above the common, even the great characters of actual life. The traditions of an heroic age were gathered up and embodied—an age in which gigantic vices were united to heroic and noble qualities in the same individuals. The ancient kings, that ruled before the republican principle was introduced, are brought forward, in scenic grandeur—the terribly tragic events, half of human and half of divine agency, the memory of which

was borne along in mythological tale, were woven into these sublime productions for the entertainment of an Athenian audience. Thus the drama became national from the heroic recollections it served to perpetuate, and the peculiarly religious air thrown over it. It was national also from the great public interest it excited, and the throngs it drew together. In tragedy, therefore, we may find the highest developement of Grecian character and genius; and he who is willing to expend the labor necessary to comprehend it, will find himself richly repaid. In the *Prometheus*, for instance, of *Æschylus*, one of the earliest dramatic performances which have come down to us—some of the most remarkable characteristics of tragedy, as well as of its author's astonishing genius, are singularly manifested.

The tone of *Æschylus* was stern and austere. He had fought in the battles of his country's liberties; and in one of his poems, '*The Persians*,' had described the humiliation of Persia, and the ignominious retreat of her monarch from the Grecian shores. The martial spirit of the poet utters its trumpet-tones in the '*Seven before Thebes*'—but, as I have remarked, the peculiar scope of Grecian tragedy is more traceable in the *Prometheus*—I mean the terrible power of Fate, subjecting gods and man to its inexorable dominion. It is supposed by critics that '*Prometheus*' was the subject of a whole Trilogv, like that formed by the three connected dramas, '*Agamemnon*, the *Choephoræ*, and the *Eumenides*.' The '*Fire-bringing*,' the '*Chained*,' and the '*Freed Prometheus*,' form the subjects of the Trilogv—and these exhaust the mythus. The '*Chained Prometheus*' is alone preserved, with the exception of a portion of the '*Freed Prometheus*,' which has come down to us in a Latin translation. The disobedient act of bringing fire from heaven, had drawn upon the head of this great benefactor of man, the vengeance of the gods. He is condemned to be chained on a rock surrounded by the ocean. Strength and Force, two symbolical personages, compel Vulcan to carry their commands and threats into execution; but he remon

strates with them on the inexorable decree, of which he is forced unhappily to be the agent. Prometheus then begins his solitary complaints. 'O divine sky, and ye swift-winged breezes, ye founts of rivers, ye countless ripples of the ocean-waves, thou universal mother earth, and thou all-seeing circle of the sun, I call on you to witness what I suffer at the hands of the gods.' A Chorus of the ocean nymphs appears and attempts to soothe him by their tender sympathy. Prometheus had closed his complaint by saying, 'The air resounds with the hurried flapping of birds' wings. Everything that approaches me is terrible.' The Chorus replies—'Fear not; this winged throng hath approached this place, in hurrying rivalry, but as thy friend—having with difficulty persuaded the mind of our father. The swift breezes brought us hither; for the sound of the clashing of brass hath penetrated the recess of our caverns, and startled us from our silent retirement—and we have rushed hither, unsandalled, with our winged chariot.'—*Prometheus*. 'Alas! alas! offspring of the prolific Tethys, children of Ocean, earth-encircling with his sleepless wave—behold! look! with what chains I am bound, and on the rocky summit of this steep, must ever keep a dreadful vigil.'—*Chorus*. 'We see, Prometheus, a sad and tearful cloud hath spread itself before our eyes, while looking upon thy body, exposed on these rocks, and held by adamantine chains; for new rulers govern Olympus—and with new laws Jupiter hath unjustly subjected it—and the powers of old he hath obliterated.' 'This, it is thought, alludes to the ancient warfare between the Titans, who symbolically represent the primeval powers of nature and the gods, which ended in the subjection of the former to the latter—or the changing of the universe from a state of chaos to a state of order and harmony. Prometheus then narrates the causes of his fall, and reveals a portion of the future. Oceanus, one of the ancient race of Titans, advises him to yield to the power of Jove, but is dismissed with deep contempt. Io appears, who is driven to wander from place to place, by the same resistless power, and listens to his prophetic revelation of her future suf-

ferings. Mercury, the messenger of the gods, arrives, commanding him, in the name of Jupiter, to reveal the secret by which the power of Fate may be averted; but in vain. The overwhelming effects of the wrath of the King of Heaven, upon the unconquered and unconquerable victim of his power, are briefly described in a soliloquy of Prometheus, which concludes the poem. 'Now in deed, and not in word, the earth is shaken to its centre. The echo of the thunder bellows around me, and the fiery-forked lightnings gleam, and the whirlwinds roll the dust; the blasts of all the winds leap forth, rushing against each other in tempestuous uproar; and the sky is commingled with the sea; so great, so terrible a tumult, is visibly come upon me. O my worshipped Mother, and thou, Heaven, that circlest the common light of all; behold how unjustly I suffer.'

'The triumph of subjection,' says a deep classical scholar, 'was never celebrated in more glorious strains; and we have difficulty in conceiving how the poet, in the Freed Prometheus, could sustain himself on such an elevation.' This sublime poem, is, indeed, a magnificent developement of an unconquerable will, bearing up against a higher power, which had chosen, in the plenitude of its greatness, to lay upon Prometheus a tyrannical hand. Chained to a rock, amidst the most terrible and appalling array of power; threatened by the messenger of the gods; disheartened by the melancholy sympathy of the ocean nymphs, and counselled to submit by Oceanus himself; surrounded by storms, and thunder, and lightning, and earthquakes—he still maintains his determined purpose, sustained by an inward energy, which knows not submission—and boldly looking to a dim and distant future for deliverance from his present woes. These noble creations of Grecian genius, need, I trust, no arguments to present, in a striking light, the advantages of their study; they need to be understood only, and they will surely be ranked among the priceless treasures of the human intellect.

Such are the materials for reflection presented in the Grecian

drama, the most perfect display, as I believe, of genius and taste that the world has ever witnessed. To set forth its claims adequately, a critical and philosophical examination of each piece would be required. I have barely given a simple and very imperfect sketch of one of the earliest—illustrated by a few brief quotations, which I have rendered in literal prose. To the drama itself I would urge you to resort, for the best exposition of its preeminent claims—for that ingenious and beautiful intermixture of ancient mythology, religion, deep philosophy, and lofty poetry, with the actual and genuine character of the Grecian intellect in its highest and purest form, which defies all rivalry and surpasses all description.

Another form in which the intellect of Greece was beautifully manifested, is to be found in her philosophy. We are too much given to hasty decisions on this interesting subject. In the pride of modern superiority, sweeping sentences of condemnation have been passed upon the whole circle of ancient labors in this curious and important department. Lord Bacon pointed out the proper mode of physical inquiry; and this mode has been adopted in mental investigation. The absurd quibbles of the schoolmen were detected, when the light of common sense shed upon them the strong illumination of truth; and the ridicule which they merited, went back and rested upon the head of Aristotle, whose principles they had so ignorantly abused. In the popular language of the last half century, absurdity, sophistry, and unmeaning jargon, have been almost synonymous with the logic and metaphysics of the Greeks. But literary justice requires that the earnest efforts of great minds, in whatever line of exertion, should be studied and appreciated in a spirit of candor.

When I contemplate the noble doctrines of Plato, and his noble manner of maintaining them; when I reflect that he taught the immortality of the soul, the corrupting power of vice, the stain which sin fixes upon the heart; that he supported his tenets by arguments which still serve as a basis to the best reasoning of the moderns; that he showed an unrivalled acute-

ness of intellect in his dialogues, as in the 'Sophist;' and joined to this a high-toned and uncompromising morality, inculcating adherence to duty, at the cost of life itself, pointing out the path of honor and virtue in the most trying situations, where fear and friendship and attachment to the world, and a sense of injustice powerfully aided the solicitations of friends, the arguments of beloved disciples, and the moving spectacle of an agonized family—exhibited in the delineation of Socrates, in the 'Phaedon'—that he portrayed the same great sage, in the character of a benevolent instructor, a kind friend, taking by the hand a youthful pupil, and leading him into the paths of true knowledge—in 'Theages'—that he himself performed the part of a devoted and affectionate disciple, in his beautiful and eloquent 'Apology'—I cannot but think it is much more fashionable to condemn, than it is to study, the philosophy of Athens. I am aware that Plato's imaginative mind led him into many fantastical theories. But it argues, I think, a feeble sense of justice, to scorn his noble views of God, of duty, and of immortality, because we may safely ridicule his 'Pyramid of Fire' and his theory of metempsychosis. We must admire and approve his belief in the divine origin and immutable essence of the soul, though we may neither admire nor approve his Utopian scheme of a republic, founded upon an unqualified extension of this system of psychology. It is but just to the writers of any country and of any age, to separate the great leading truths which they attempt to illustrate and enforce, from the particular forms, in the shape of theories and hypotheses in which those truths are folded; for theories and hypotheses may be false or visionary, but they may serve as vehicles for that sentiment of truth, which, so long as yon broad sky is above us, and this fair earth beneath us, and this mysteriously mingled union of physical and immortal powers is within us—will be an inmate of the human soul.

When I reflect that Aristotle listened twenty years to the instructions of his master; that he compassed the whole extent of human learning; that, in natural history and philosophy, he

stood unrivalled and alone ; that he drew up a system of logic, which, more than any system ever devised by man, has received the applause and guided the researches of past ages ; that to his instruction the greatest general of antiquity confessedly was more indebted than to all besides, for his commanding pre-eminence ; that Cicero, the best judge in literary and philosophical matters that the ancient world produced, said of him, *Ex-cepto Platone, haud scio an recte dixerim principem philosophorum* ;—I must still believe it more fashionable to utter fluent and flippant contempt against the quibbles of the Stagyrite, than to study the hard, severe, the iron reasoning of ‘the Prince of Philosophers.’

When I contemplate the character of Socrates, as portrayed by Plato and Xenophon, his pure, precise, and philosophical ethics, his almost christian temper, his high moral firmness, his confidence in a future existence, his belief in the rewards of virtue—when I contemplate this character, formed by self-discipline, from natural propensities to licentiousness and depravity—when I read that from his instruction went forth a school of sages to whom Greece owed, in great part, that splendid reputation for wit, genius, and philosophy over which ‘decay’s effacing fingers’ pass but lightly—my belief is yet stronger, that it is much more fashionable to descant upon the worthlessness of Grecian philosophy and Grecian morality, than to study the noble characters which that philosophy and morality produced.

The most practically useful portion of Greek literature, to an American student destined for public life, would perhaps be considered its oratory. The publicity with which great national questions were discussed in Greece, gave rise, particularly in Athens, to the strenuous study of this art. All public men were public speakers. It was by direct action upon the popular mind, that commanding influence was won and retained. The example and history of the first of orators, are most worthy models for the imitation of all in every age, who aspire to the glory of oratorical renown. The style and power of the eloquence of Demosthenes have been two long cele-

brated for me to urge them upon your consideration now. But there is one portion of that great man's history, to which I cannot forbear alluding, as a most thrilling passage. I mean the 'Contest for the Crown.' The Athenian people had resolved to reward the public services of Demosthenes, by presenting him with a golden crown. Ctesiphon had taken the lead in this act of popular recognition of the orator's merit, and became, in consequence, odious to his enemies. Æschines, whose jealousy and enmity to Demosthenes had been manifested on several previous occasions, instituted an impeachment, and had Ctesiphon prosecuted before the public assembly. This was a great, an intensely interesting occasion. Public curiosity was awake; expectation was excited; the two greatest orators were to appear, in the desperate attempt to measure strength with each other. Never was an occasion more exactly calculated to arouse Athenian inquisitiveness than this. On the one side was jealousy, vindictiveness, and envy, supported by powers acknowledged to be second to none but those of the man of the nation. On the other, the popular enthusiasm to bear onward, unrivalled reputation to sustain, the consciousness of resistless power, and the tremendous consequences of defeat. Every motive that could be impressed upon the mind in that age, was present before them. The day came on. The crowd was assembled. The orators successively arose, and the listening multitudes hung, hour after hour, upon the speakers' lips. But the matchless eloquence of Demosthenes prevailed, and his enemy was banished. Fortunately we have these celebrated orations preserved, and can therefore appreciate those gifts, which, at Athens, were ranked so high. The eagerness with which the Greeks listened to these magnificent efforts of intellect, and read them from year to year, may be estimated by the eagerness with which we lately rushed to the pages of our own Demosthenes, after he had won his splendid victory on the Senate-floor of our country.

1. The orations of Demosthenes afford an admirable study, both to discipline and arouse the mind. It requires no little

labor to acquire the power of entering into their spirit fully. They must be studied until the train of thought, the peculiar expressions, and the general character of the whole are perfectly familiar; and then it is impossible for any one, who feels the power of eloquence, not to be borne irresistibly along by their impetuous torrents of thought, argument, and illustration. The effects of this thorough and reiterated study of Demosthenes, are well described by Wytttenbach, one of the most distinguished classical scholars the continent of Europe has lately produced. 'O salutare repetitionis consilium nec unquam satis prædicandum! ecce denuo religens, novus plane et incognitus ad animum meum accidit sensus. Adhuc in aliis auctoribus, intelligentia non nisi delectationis mihi voluptatem attulerat, cum ex rerum verborumque perceptione, tum ex progressum meorum animadversione: nunc inusitatus et plus quam humanus affectus mentem permeat, et quâvis lectione invalescit. Video oratorem ardere, dolere, impetu ferri; incendor et ipse, eodemque motu auferor: altior fio nec sum qui fueram; videor mihi Demosthenes ipse esse, stans in tribunali hanc orationem habere, Atheniensium concionem ad majorum virtutem et gloriam hortari; nec tacitus lego, ut inceperam, sed altâ voce; ad quam tollendam imprudens inducor, cum sententiarum evidentiâ et fervore, tum numeri oratorii efficaciâ.*

* 'O excellent plan of reviewing! never sufficiently to be inculcated! Lo! as I re-peruse the orator's pages, a new and before unknown feeling penetrates my mind. Before this time, in reading other authors, I had derived, from understanding them, gratification and delight, both in comprehending the train of thought and language, and in observing my own advancement. Now, an unusual, a more than human excitement rushes upon me, and grows stronger by every repeated reading. I see the orator ardent, indignant, hurried by the flow of his eloquence. I am enkindled myself, and borne along by the same mighty impulse. I become loftier, and am no longer the man I was: I seem to myself to be Demosthenes, standing upon the tribunal, pronouncing that same oration, exhorting the assembled Athenians to imitate the valor and win the glory of their ancestors. I read no longer silently, as I had begun, but aloud. I am led unconsciously to raise my voice, by the clearness and fervor of his sentiments, and the power of his rhetorical harmony.'

2. It would be useless for me to attempt a full and just exposition of the claims of Grecian genius upon our studious attention. As I have before remarked, a detailed and philosophical history would alone unfold all the relations, in which a familiar acquaintance with its masterly excellences would benefit the mind, and prepare it for future usefulness in the actual world around it. But I cannot help adverting to the high moral effects of a classical course of study, upon the heart and character.

I am aware that wise and good men have objected to ancient literature, on the ground, that the deities of Greece and Rome are represented as indulging in human vices and passions. But it does not seem to me possible that a poetical description of the pagan gods—understood to be merely poetical—can have any bad tendency. At least, the mind capable of being injured by an influence so indirect and distant, would be injured in a tenfold greater degree by the most ordinary temptations of daily life. In all other respects, the moral influence of classical learning, is certainly excellent; and this excellence appears most conspicuous on comparing it with the miscellaneous reading so common among students of the present day. The severe intellectual discipline of former times, has, I fear, become too nearly obsolete. The great passion of our age, is to acquire knowledge without labor. This I think is to be deprecated. Labor is the unavoidable condition of all excellence whatever. He who attempts to reverse this first law of our being, attempts the greatest of impossibilities. We read the periodicals and other popular works, and dream that we are winning knowledge with infinitely greater rapidity than our predecessors; and congratulate ourselves, that the studious days and watchful vigils of the gigantic scholars of old, are now no more. Besides that portion of our popular reading, which is merely light, there is much positively pernicious. The dangerous and seducing sentiment of many works which the press in its abundance pours out upon us, weakens the character and corrupts the heart. It steals in, like a subtle

poison, with the beauties of imagery and the fascinations of style, softens the firmness of moral feeling, and destroys the sternness of virtue. The elegant vices of fashionable life come to us adorned with the charms of perverted genius, and fasten themselves, with their taint and their blight, upon the young and excitable spirit. Even when these vices are described but to be satirized, they are held up in such a light, as to tempt imitation. Who has not seen the influence of 'Pelham' in the affected, effeminate, absurd manners of many young men of the present day? Who has not seen the moody melancholy of Byron transferred from his pages to the brows of many a conceited misanthrope, whose only resemblance to the poet was his bared neck and his down-turned collar? It is this pernicious influence of our present light reading, upon the character, the manners, and the heart, which most needs correction. Such a work as Mr Moore's *Life of Byron* is calculated to effect more injury, by smoothing over a life filled up with the most degrading vices, and by representing utterly abandoned profligacy as the venial and even necessary foible of splendid genius, than the whole circle of heathen gods and goddesses, were they ten times as bad as they are represented in Homer's Olympus.

The tone of ancient literature is everywhere high. A clear and severe study of it, does, I am convinced, contribute more to the formation of a truly manly character, than any other study whatever. The strong patriotism, which is one of its leading traits, when modified by the superior light of modern times, is, to my mind, a strong recommendation. There is not the slightest danger, that we shall fall into ancient excesses, and stigmatize all who are not born on our American soil, with the epithet of barbarians. We look with too much reverence every opinion imported from beyond the Atlantic, and with too much distrust upon our own, for the just apprehension of such a danger. The patriotic spirit of ancient literature, strong as it is, may safely be met, in the education of

our young men. They will find nothing of that vitiating sentiment, which taints so large a portion of the common literature of the day, in the pages of Grecian and Roman classics. The fine minds of antiquity were filled and glowing with visions of the greatness and happiness of mental excellence—the *aliquid immensum infinitumque* of Cicero, was aspired after, in the longings of those noble spirits, in other regions of intellect no less than in oratory. Believing as I do of those studies, I cannot but regret the comparative indifference, with which, in these days of utility and reform, we have seen them treated. I trust the prejudice against them is one of those popular prejudices, which, after a temporary triumph, sink to an everlasting oblivion. I trust the cavils of men who never read an ancient author in the comprehensive spirit of philosophical research will not, in many minds, be permitted to outweigh the united testimonies of the greatest men the world has ever seen. The long array of scholars, and poets, and orators, and statesmen, who formed their tastes in the school of antiquity, form a cloud of witnesses, whose testimony goes as far as testimony can.

But I do not think we are able to judge, from the course of classical learning common among us, of its legitimate effects. A few volumes of extracts, some of them containing but poor specimens of the rich literature of the Greeks, constitute the whole mass of reading, by virtue of which we call ourselves classical scholars. Not one graduate in a hundred, probably, from our best colleges, has ever read the entire works of a single Greek author—and yet we do not blush to talk loudly of the uselessness of classical learning. That this department of education ought to be placed on a widely different footing, I have no hesitation in asserting. Instead of confining our courses of what we call a liberal education, to Professor Dalzell's *Minora* and *Majora*, or other books of a similar nature, which would answer well enough for elementary works in schools, we must take up the general study of antiquity—read the authors connectedly and entirely—illustrate them by philosophy, poli-

tics, geography, history, customs and manners, mythology and religion—and then we may decry, if we will, the advantages of classical learning. In the present day, we not only confine ourselves to the shreds and patches of ancient literature, but are devising new modes to shorten the labor of acquiring this poor supply of ‘beggary elements.’ Almost every day presents some wonderful apparatus for attaining, in a few months, a thorough knowledge of Latin or Greek or Hebrew, which, when men could talk Greek, as Cotton Mather says, by the hour, and write Hebrew as fast as their mother tongue, would have entitled them to the penalties attached in those days to the forbidden exercise of unholy powers.

I am no advocate for the old scholastic systems of teaching. I have no wish to see young scholars forced to spend tedious days and months and years, in conning, page after page of barbarous Latinity, before they understand the meaning of a single word. But I do believe, and I think my opinion is borne out by literary history, that the old-fashioned systems, bad, absurd, oppressive, as many of them were, produced better scholars, riper intellects, cooler heads, than any of the labor-saving machines, which have in such multitudes been the playthings of this self-indulging age. I doubt not they have apparently promoted the rapid and easy attainment of learning; but, if they have been successful in the final issue, it has been only through the skill of the teacher and the genius of the learner, which gained the object in spite of them.

If, then, it be a desirable thing that our young scholars should be trained up in classical pursuits, and in such a manner as best to fit them for the duties of life, it is evident a general change must be made, and that change must begin somewhere. Those who are devoted to the business of instruction, must enter more deeply, more philosophically, into the spirit of the classics, than has been common among us in these latter times. We must put forth our best energies to master the treasures of learning, and awaken in our pupils an enthusiasm

for similar pursuits. No great object has ever been achieved, no glorious enterprise has ever been accomplished, without the inspiration of an enthusiastic soul to lead onward—to conquer difficulties—to fulfil miracles. No halfway devotion of the powers will win that success which a man of genius may be proud of, in this laborious career. It is no theatre for the labors of him who aims at another and a different profession—it is no stepping-stone to a more elevated position in society. If it were, no man, conscious that he has within him the elements of distinction, would stoop his eagle faculties to an employment, fit only to exercise the genius of a plodder. In the whole circle of the learned professions, I know of none which presents nobler topics of eloquence, more exciting and elevating subjects of reflection—and, I may add, more useful fields of labor, than that of a man of letters. Indolence and stupidity have no part nor lot here—every power is called upon—every moral feeling is confirmed—and every honorable aspiration may be gratified. It is not my purpose to eulogize the profession of a teacher; but when I see many engaging in it with dread, and leaving it with pleasure—when I hear it spoken of as a fit resort for the drudge and the blockhead—I cannot but ask, if the explanation of the great authors of the ancient world—embracing, as it does, such a depth and variety of learning—admitting, as it does, the highest flights of imagination and eloquence—employing, as it does, thousands of the first intellects of the first intellectual country on earth—I cannot but ask, if it is a fit resort for a drudge or a blockhead,—if it is a pursuit to be adopted with dread, and relinquished with pleasure. My answer to these questions would be one and decided.

It seems to me, that American intellect enjoys peculiar advantages for its development. We feel immediately every movement of the spirit of the age; our plastic institutions adapt themselves at once to every improvement: but the danger is lest we mistake empiricism for improvement. If we are careful to adopt the good and avert the evil of our singularly hap-

py situation, our intellectual destiny is fixed. Aloof from the corruptions and quarrels of the old world, we enjoy, as soon as wind and wave can waft them to our shores, the science and the literature, so profusely nurtured in those, their ancient abodes. With ourselves it must remain, to cultivate the manly spirit which is so preeminently the tone of the literature of antiquity.

August 14, 1830.

MR ADAMS' LECTURE.

THE NEW YORK PUBLIC LIBRARY

LECTURE XIII.

ON THE
CONSTRUCTION
AND
FURNISHING OF SCHOOL ROOMS ;
AND ON
SCHOOL APPARATUS.

BY WILLIAM J. ADAMS.

AMONG the means of instruction hitherto deemed but secondary, or overlooked as insignificant, may be mentioned the construction, furniture, and apparatus of school-houses. To many, even at this moment, the whole subject appears unprofitable and barren. 'Why waste time,' says one, 'in a grave disquisition upon black-boards and birch rods? The pegs for the hats, and the semicircles for the toes, are they not described in the books of Bell and Lancaster?'—'What matter,' demands another, '*where* the child gets learning, provided he actually gets it? The Athenian sage gave lessons in the fields;—and in this very city, the Athens of New England, the best of schools is found in the worst of buildings.'—'Observe,' says a third, 'the spirit of the age! In these mechanical, labor-saving times, we must have a *mill*, in which to *grind* scholars;—something in which the moving power is no longer the unfailing stream of patient, sound instruction,—a *machine*, in fact, which steam may turn, and a child direct.'

Such levity, let us pardon and dismiss. It is not my design to give an undue consequence to trifles. In the great cause, which it is the object of this convention to advance, a deep and unusual interest begins to pervade our land; and the improved vision, which magnifies and more highly appreciates the end, discerns more clearly the importance of the means. I call my brethren to witness, whether the embarrassment arising from an ill-constructed school-room deserves to be called a *trifle*. Is there nothing desirable in a quiet location—in pure air, agreeable temperature, ample space, and sufficient light?—in seats and desks adapted to the comfort and health of the pupils, and to the best modes of preserving order, and communicating knowledge?

Absolutely, therefore, as well as relatively, the subject is one of high importance, and deserving of more respectful attention than it has yet received in New-England. *School architecture*, among us, is an art, of which one man knows as much, or rather as little, as another. A school-house is to be erected. Observe the process. The affair is entrusted to a building committee;—patrons of learning, indeed, but wholly unpractised in the routine of schools. These worthy men, faithful economists of the public money, proceed to calculate the greatest number of children that can exist in a given space. Each has his own favorite plan, in the very novelty of which he has found amusement, yet is courteous enough to yield something to the rest;—and thus, an edifice, monstrously inconvenient, and without unity of design, is the harmonious result.

The want of certain rules and fixed principles in the construction of school-houses, is at length beginning to be felt. School-rooms have been remodelled, new ones are visited, and plans are in demand. It is my present purpose rather to introduce the subject to the notice of the convention, and to commend it to the consideration of every member, than to afford any valuable information upon it. It must remain for future lecturers, to lay before you opinions longer agitated, better sanctioned, and more profitable, of course, than the crude hints of an individual.

In the construction of school-houses, it were vain to expect a perfect uniformity. The arrangement of rooms must vary, not only with the mode of instruction, but with the number, age, sex, studies, and classification of the pupils. Arrangements widely different from each other may, indeed, sometimes prove equally good. There are, nevertheless, several established principles which apply to every case.*

In erecting a school-house, the first object is its *location*. This should, if possible, be quiet and retired. The ground should be dry, the air pure, and surrounding objects agreeable. For the same reasons that it is desirable to procure a teacher of pleasing address and happy temper, all other means of endearing the spot, and investing it with pleasant associations, should be diligently sought. This consideration is often overruled by the absurd demand for a situation precisely *central*; and thus the school-house, instead of being placed on a quiet hill-side, where oaks wave and birds sing, stands far down the valley, echoing forever the din of the blacksmith, and the roar of the factory. In cities, retirement is generally out of the question. Yet even here, it were desirable that the access should be through an arched way or alley, to a spacious court within. Such retirement would be worth more than the most advantageous display that could be made of the building as a public edifice. To spare the student the annoyance of stages passing every hour, and '*hourlies*' every fifteen minutes, it would be well if that part of the street against which the school-house stands, were *macadamized*. Some protection might be found in placing the building, if oblong, with an end, rather than a side, towards the street.

Every school-house should have its *play-ground*. This should not lie in front of the building, especially in cities, un-

* Some of these may be found in the School Manuals. There is a valuable article upon the subject in the School Magazine, No. 1, published as an appendage to the Journal of Education in April, 1829.—Wilson's Manual has lately been republished in New York, with improvements adapted to the Infant Schools of the United States, and contains an excellent plan for the construction of a building for this class of schools.

less screened from the street by a high wall, or fence. A large space should if possible be planked, or paved with bricks, and a portion sheltered by a roof. Here should be a pump, with good water, and some of the cheapest and least perilous articles of gymnastic apparatus.

In considering the interior of the 'noisy mansion,' we have to solve a variety of problems. Is it an infant school, or a high school?—for males, or females?—in town, or country?—Is the course of study limited or extensive?—the instruction given by several professors, each engaged in a separate field, and requiring his separate recitation-room?—or is the whole business conducted, as in mutual instruction, in a spacious hall, and under a single head?

Under all varieties, there is one point which should never be neglected; viz. *ventilation*. In the pressure of recitations, and the ardor of business, teachers are apt to overlook several of these minor points, less momentous, indeed, than the sciences they teach and yet perfectly indispensable. It is not my present business to treat of physical education, and I shall only notice two valuable modes of ventilation that are getting much into use; 1st. that of making the windows so as to be easily let down at top, and, 2dly. that of having oval apertures in the ceiling, for the escape of impure or heated air.

In this connexion, may be mentioned the *warming* of school-rooms. Fire-places are in general preferable to stoves, and open stoves to close ones. In sea-ports, however, there is less expense, if not less trouble, in the use of coal, than in that of wood. When a close stove is used, it should be placed in a corner of the room, against a fire-proofed wall, and very near the door, through which, when opened, the current of air shall pass between the stove and the pupils. This is admirably arranged in the Boylston School of this city. When a fire-place, or open stove is used, there should be behind the chimney, a space, or chamber of brick, communicating with the external atmosphere. Into this, according to well-known principles, the cold air rushes from without, becomes heated, and sends into the room, through orifices in the jambs, an agreeable and

wholesome warmth. In the English High School of Boston, this is the only heat obtained, the furnace being in the cellar, and the warm and rarefied air ascending into the different rooms through flues built into the walls.

To regulate the temperature, whether in summer or winter, every school-room should be furnished with a thermometer.

A great error in the construction of the school-houses of Boston, and with which, it is believed, those of New York and Philadelphia are much less chargeable, is the want of *sufficient space*. More pupils are crowded into one room than is consistent either with comfort or health. Ample room is important from other considerations besides that of mere ventilation. Beyond a certain limit of numbers, or rather a certain proportion of numbers to the whole area of the floor, all the school evolutions become embarrassed. If possible, the number of seats should be such as to leave space for the whole school to come out, if required, and stand in straight lines, or in semicircles, to recite. I would not here be understood to prescribe the mode of conducting recitations, but only to recommend the amount of space to be reserved. In large buildings, one end should be partitioned off, making one or more classrooms, without desks, and merely for the purpose of conducting a recitation in greater retirement. This point is very conspicuous in the High Schools of New York. Judging from my own observation, those schools are conducted with peculiar ease, and wear the most cheerful aspect, where there is a wide passage between the body of desks and the wall, quite round the room. In monitorial instruction, this allowance of space is indispensable, and, under any system, it is desirable, both on account of the increased airiness of the room, and as furnishing an agreeable promenade for the pupils in inclement weather. The space thus reserved is also valuable for the convenience of public exhibitions, for which the schools of Boston appear to make no provision.

To exhibit the comparative liberality of different cities in their allowance of space to schools, I have collected the following facts.

The Bowdoin School, Boston, 66 ft. by 33, receives 300 pupils on a floor.

" Franklin School, Boston, 60 ft. by 40,	"	300	"
" Locust St. School, Philad. 80 ft. by 50,	"	320	"
" Providence High School, 98 ft. by 40,	"	250	"
" N. York Male High School, 72 ft. by 47	"	200	"

Dividing the space among the pupils who occupy it, gives to each pupil in the Bowdoin School $7\frac{1}{4}$ square feet.

" Franklin,	"	8	"	"
" Locust St.	"	12	"	"
" Providence High,	"	12	"	"
" New York High,	"	16	"	"

Of these,* the minimum is *seven and a quarter* feet; the maximum, *sixteen*. Joseph Lancaster, the greatest of school economists, in his arrangements for cheap and extensive charity-schools, allows to each pupil *nine* feet.

It is often found inconvenient to occupy a considerable portion of the floor, owing to its proximity to the windows. It may here be recommended as an improvement, to place the windows at a greater height than has been customary. A space of wall under the windows, is thus furnished for hanging maps, pictures, printed lessons, black-boards, or, if necessary, hats and coats. Another advantage is, that the windows may be opened, if thus placed, with less danger from cold air; and a third, that the attention of the children is less liable to be diverted by objects out of doors. The height of the window-sill from the floor, should be at least five feet.

It is a custom of long standing, to place the seats and desks upon an *inclined floor*, or a series of gradually ascending platforms, for the purpose of giving the teacher a facility of seeing all his pupils at one view. This I deem unnecessary, except when the floor is of very great extent. It is more convenient, and far less expensive, to increase the elevation of the master's desk. It is surprising how small an elevation of the platform will suffice to give him a free inspection of the whole school.

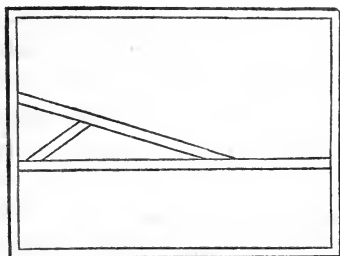
* In obtaining these results, the space used for entries has been uniformly deducted.

Eighteen inches is generally sufficient, though in some schools I have found it three feet. A level floor affords the most space for air, and with it, the advantage of high windows, just mentioned, is the more easily secured.

There is still another evil attending the inclined plane. As heated air rises to the highest level, it has been observed in rooms warmed by a current of such air received from furnaces, that children suffer from cold in the lowest seats, and from heat in the highest, at the same moment.

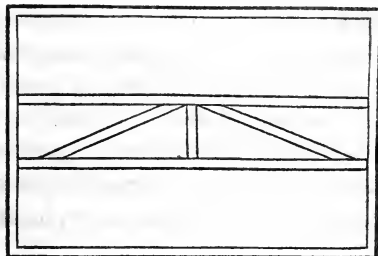
There is, however, one case in which the inclined plane offers an important advantage. In producing the desired inclination, the beams of the floor may be so framed as to afford the advantage of an arch, and thus, in a building of more than one story, to prevent the necessity of disfiguring any of the rooms by pillars. Diagram, No. 1, represents a construction of

No. 1.



this kind. The sleepers, together with their braces being mortised into the beams, the floor is rendered perfectly firm and inflexible. Where the height of the several stories will permit, plan No. 2, is much to be preferred. A level floor is here

No. 2.



retained, at the same time that its strength is greatly increased, and the walls are secured from lateral pressure. The loss of the space left between the upper floor and lower ceiling, is still further compensated by a construction which renders the noise of feet above, imperceptible below. This space, in ordinary cases, needs not exceed two feet.

The next point to be considered is the construction of *seats* and *desks*. The most economical, not only of room, but of the quantity and expense of material, is, doubtless, that ancient form, in which the seat occupied by a row of pupils is attached to a desk of the same length immediately behind,—which supports the back. The inconveniences of this arrangement are obvious. As there is no precise length of seat appropriated to each individual, much crowding must occur. Most of the pupils, in order to leave their seats, must interrupt their neighbours by climbing up behind them. There must necessarily be many, whom the teacher cannot approach near enough, either to inspect their work, or to render them assistance. There is, however, one case, in which this form is preferable to any other; viz. in mere *recitation-rooms*, or those in which large numbers assemble to hear a lecture, or a declamation.

The most modern construction appears to be that of detaching the seat occupied by each pupil both from the desk behind, and from the other seats;—the desks themselves remaining continuous, as before. The seats are made without backs, and behind them is a passage for walking. In this way each child is *insulated*, is perfectly accessible, and can leave his place at any time without interrupting his class-mates. This arrangement is favorable to the coolness and general comfort of the pupils, as well as to the preservation of order. Each seat should be about eight inches distant from the next in the same row, and the passage behind should be twelve inches wide. The seat itself is either a piece of plank, nine inches by twelve, with the corners rounded off, nailed upon a firm pedestal; or, it may be simply a *box* without a cover, made to stand upon

one end, and fastened to the floor. The open side is in front, and within is a hook for hanging a hat.

To the plan just described there is still one objection; viz. the want of some support for the back. This want may be supplied by the upward continuation of the board which forms the rear of the box,—perpendicularly, so as not to encroach upon the passage behind, and so low as to reach only the hollow of the back of the child, without touching the shoulder-blade.

If, after all, we regard cheapness, and the facility of sweeping the floor,—matters of some importance in a large school, and in a great degree sacrificed in the construction last mentioned,—there is still a modification of the old plan, which may be sometimes found preferable to all others. It is that in which the length of each desk with its seat, is made sufficient for only two pupils. By means of the *transverse* passages thus formed, and without passages in the rear, the teacher may readily place himself at the side of any individual, and the pupil is at the same time exempt from the painful duration of the old form. If, therefore, instead of passages of twelve inches behind the seats, we suppose these transverse passages of sixteen inches, the area gained will be equivalent to a space twelve inches long by four inches in width, for every pupil. This construction may sometimes be still further improved, by leaving the front row of desks without transverse intersections, and allowing it the rear passage. A recitation bench is in front of all, upon which a class may sit, free from the interruption of other boys, who, in coming in or going out, might be obliged to pass between the master and his class.

A convenient rule for regulating the height of seats and desks, is, to suppose the former of such a height that the knee shall be bent at a right angle, the foot resting firmly on the floor. If, then, the pupil sit perfectly upright, the place of the elbow will indicate the true level for the *edge* of the desk. Each desk should have a slope, but so slight that books and slates may not slide off.

The inkstands need be nothing more than a small cup, fitted into a hole bored through the wood, but so loosely as to be easily taken out for the purpose of filling. They may be covered, as in Mr G. F. Thayer's School, with wooden slides, or, as in the Boylston School, with a metallic lid resembling a common butt hinge.

The desk may either have a shelf beneath, or it may be a box, of which the lid is the cover. By the former modes much noise is prevented, while the latter is more favorable to neatness and good order in depositing the books. Locks and keys are unnecessary, and the frequent losing of keys is found to cause much trouble. The noise of desk-lids may be diminished by nailing list under the edges. Through the highest level of each desk a groove should be cut, forming a deposit for the slate, which, when thus placed, is always at hand, yet takes up little space, and is out of the way.

It remains to add some remarks upon SCHOOL APPARATUS.

For many a generation, this was simply the *book* and the *ferule*. Wisdom has at length listened to Philosophy, and borrowed from her various other implements, which she now substitutes occasionally for both. Sensible objects, judiciously selected, and properly exhibited to the young student, are found to contribute wonderfully to his advancement in all good learning. In fact, books and lectures, without these means of illustration, are precept without example; theory without practice; uninteresting, hard to be understood, and soon forgotten. The ruinous practice of requiring the assent of children to abstract truths before they have been made acquainted with particular facts, is happily going into disuse. Children are now permitted, to some extent, to gather knowledge as men do. Let us encourage this reasonable revolution. Let children have opportunity to see, think, and judge for themselves, and their increased vigor of mind, and early force of character, will doubtless raise them, under judicious guidance, to the rank designed for them by their Creator. The world is full of apparatus;—but the teacher, in times past, has been too slothful,

or too dogmatical, even to point to it. If unprovided with an artificial globe, he could not think even to buy an orange, and draw upon it with his pen an outline of the continents ;—much less, besides this, to take off the rind, and illustrate the projection of maps. If the boy had to learn geographical definitions, he could not guess their meaning, or perhaps he entirely misapprehended it. ‘The earth is *spherical*,’ said the pupil, ‘i. e. *round*,’ said the master,—(if he said anything at all,)—and the child readily assented, all the time understanding by this globe, a circular plane,—or, to mention the writer’s own early experience, a hollow ball,—half filled with earth, upon the level surface of which, he himself was standing, while the shell above him formed the sky !

Infant schools, particularly, require much apparatus. The room should abound in specimens and pictures,—exhibiting the various trades of men, the costumes of nations, the habits of animals,—and illustrating all the simpler laws of the universe.

To proceed to schools of a higher grade, still keeping within the range of things practicable in what are called common schools, I shall conclude with mentioning the most essential articles :

1st. A *Time-piece*,—placed so as to be easily seen by the whole school. The advantage thus gained consists in the tendency to produce habits of punctuality and dispatch.

2d. *Maps and Globes*,—and in general, any other apparatus, provided it be simple and cheap, which helps to explain the great phenomena of the earth. Many valuable articles of this kind, designed for common schools, have been made under the direction of Mr Holbrook, and are for sale in this city.

3d. *The Black-board*.—One or more of these should be found in every school. For the facility it affords the teacher in making illustrations and in exhibiting the proficiency of pupils, this piece of school-furniture is almost invaluable. In some schools, it has been deemed so important as to form part of the *wall*, all round the room. Its uses are not confined to

arithmetic and algebra, but are important in geography, astronomy, grammar, translation, drawing, penmanship, and almost every other branch.

4th. The *Abacus*, or *Numeral Frame*.—This 'consists of a square frame, divided by ten strong wires, each of which passes through ten painted wooden balls, easily moveable from one end to the other.' This instrument is highly useful in illustrating the various combinations of numbers. Its use is, nevertheless, found injurious, if continued beyond a certain period,—and should be occasionally dispensed with, from the first.

It is not my business to speak of all the conveniences desirable in schools conducted in peculiar modes. Infant schools, and monitorial instruction, require their appropriate apparatus; and are topics so extensive, as justly, in the opinion of our Committee, to demand a distinct consideration. Neither is it within the limits of this lecture to mention all the apparatus proper for schools of the highest grade. It is not our colleges, so much as the common schools of our country, that claim the earliest care of this association. I feel justified, therefore, in having solicited your undivided attention, for the present, to this latter and far wider field. Beyond this I shall go no farther than to call your attention to the *optical instruments* manufactured by Pike, of New York; the *air-pumps*, by Mason of Philadelphia, and to the originality and surprising simplicity exhibited in the *pneumatic apparatus* and *steam engine*, made by Messrs Codman and Claxton of this city.

In laying these suggestions before the association, I feel much diffidence, when I consider that many who have heard them, are quite as familiar with the subject as myself. Yet I offer no apology,—feeling assured that Science will not frown on the humblest attempt to enlarge and beautify her temples.

CONSTITUTION
OF THE
AMERICAN INSTITUTE
OF
INSTRUCTION.

PREAMBLE.

WE, whose names are hereunto subjoined, pledging our zealous efforts to promote the cause of popular education, agree to adopt the following Constitution, and to obey the By-Laws made in conformity thereto.

ART. I.—NAME AND OBJECT.

THE Society shall be known by the title of the AMERICAN INSTITUTE OF INSTRUCTION. Its object shall be the diffusion of useful knowledge in regard to education.

ART. II.—MEMBERS.

1. Any gentleman of good moral character, interested in the subject of Education, may become a member of this Institute, by signing this Constitution, and paying, at the time of his admission, a fee of one dollar.
2. An annual assessment of one dollar, shall be laid upon each member; by neglecting to pay which, for more than one year after due notice from the Treasurer, he shall cease to be a member of the Society.

3. Any gentleman, by paying at one time the sum of twenty dollars, shall become a member of the Institute for life, and be exempted from all future assessments.

4. Honorary members may be elected by the Institute, at the recommendation of two thirds of the Directors present at any stated meeting of that Board.

5. For dishonorable or immoral conduct, a member may be dismissed from the society, by a vote of two thirds of the members present, at any regular meeting.

6. Ladies, engaged in the business of instruction, shall be invited to hear the annual address, lectures, and reports of committees on subjects of Education.

ART. III.—MEETINGS.

1. The annual meeting of the Institute shall be held at Boston, on the Thursday next preceding the last Wednesday in August, at such place and hour as the Board of Directors shall order.

2. Special meetings may be called by the Directors.

3. Due notice of the meetings of the Society shall be given in the public journals.

ART. IV.—OFFICERS.

1. The officers of the Society shall be a President, Vice Presidents, a Recording Secretary, two Corresponding Secretaries, a Treasurer, three Curators, three Censors, and twelve Counselors, who shall constitute a Board of Directors.

2. The officers shall be elected annually, in August, by ballot.

ART. V.—DUTIES OF OFFICERS.

1. The President, or, in his absence, one of the Vice Presidents, or, in their absence, a President *pro tempore*, shall preside at the meetings of the Institute.

2. The Recording Secretary shall notify all meetings of the Society, and of the Board of Directors; and he shall keep a record of their transactions.

3. The Corresponding Secretaries, subject to the order of the Board of Directors, shall be the organs of communication with other Societies, and with individuals.

4. The Treasurer shall collect and receive all moneys of the Institute, and shall render an accurate statement of all his receipts and payments, annually, and whenever called upon by the Board of Directors; to whom he shall give such bonds for the faithful performance of his duty, as they shall require. He shall make no payment except by their order.

5. To the Board of Directors shall be entrusted the general interests of the Society, with authority to devise and carry into execution such measures as may promote its objects. It shall be their duty to appoint some suitable person to deliver an address before the Institute, at their annual meeting; to select competent persons to serve on Standing Committees, or to deliver lectures on such subjects relating to education as they may deem expedient and useful; to collect such facts, as may promote the general objects of the Society; and to provide convenient accommodations for the meetings. They shall, at the annual meeting, exhibit their records, and report to the Institute. They shall have power to fill all vacancies in their Board, from members of the Society, and make By-Laws for its government.

6. It shall be the particular duty of the Curators to select books, and to take charge of the library of the Institute.

7. The Censors shall have authority to procure for publication the annual address and lectures. It shall be their duty to examine the annual reports of the Standing Committees, and all other communications made to the Society; and to publish such of them, as, in their estimation, may tend to throw light on the subject of Education, and aid the faithful instructor in the discharge of his duty.

8. It shall be the duty of the President, the Vice Presidents, and Counsellors, severally, to recommend to the consideration of the Board of Directors, such subjects of inquiry, as, in their opinion, may best advance the great objects of the Institute.

9. Stated meetings of the Board of Directors shall be held at Boston, on the first Wednesday in January; on the last Wednesday in May; and on the day next preceding that of the annual meeting of the Institute, in August.

ART. VI.—BY-LAWS AND AMENDMENTS.

1. By-Laws, not repugnant to this Constitution, may be adopted at any regular meeting.

2. This Constitution may be altered or amended, by a vote of two thirds of the members present at the annual meeting, provided two thirds of the Directors, present at a stated meeting, shall agree to recommend the proposed alteration or amendment.

BY-LAWS.*

1. ON A QUORUM.

At all meetings of the Board of Directors, seven members shall be necessary to constitute a quorum for the transaction of business.

2. COMMITTEE OF FINANCE.

The Board of Directors shall annually choose a Committee of Finance, whose duty it shall be to audit the accounts of the Treasurer, and, under control of the Board of Directors, to draw orders on the Treasurer for the payment of charges against the Institute.

3. SPECIAL MEETINGS.

It shall be the duty of the Recording Secretary, on application of any two members of the Board, to call special meetings of the Board of Directors.

* Adopted August 24, 1830.

OFFICERS

OF THE

AMERICAN INSTITUTE OF INSTRUCTION, FOR THE YEAR 1830—1831.

PRESIDENT.

FRANCIS WAYLAND, jr. President of Brown University, Providence, Rhode Island.

VICE PRESIDENTS.

WILLIAM B. CALHOUN, Springfield, Massachusetts.

WILLIAM SULLIVAN, Boston, Massachusetts.

JOHN ADAMS, Andover, Massachusetts.

JOHN PARK, Boston, Massachusetts.

NATHAN LORD, President of Dartmouth College, Hanover, New Hampshire.

THOMAS H. GALLAUDET, Hartford, Connecticut.

ANDREW YATES, Chittenengo, New York.

THEODORE FRELINGHUYSEN, Newark, New Jersey.

ROBERTS VAUX, Philadelphia, Pennsylvania.

WILLIAM C. FOWLER, Middlebury, Vermont.

REUBEN HAINES, Germantown, Pennsylvania.

BENJAMIN O. PEERS, Lexington, Kentucky.

NATHAN GUILFORD, Cincinnati, Ohio.

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JOSIAH HOLBROOK, Boston, Massachusetts.

WILLIAM RUSSELL, Milton, Massachusetts.

CENSORS.

EBENEZER BAILEY, Boston, Massachusetts.

JACOB ABBOT, Boston, Massachusetts.

GEORGE B. EMERSON, Boston, Massachusetts.

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WALTER R. JOHNSON, Philadelphia, Pennsylvania.

J. KINGSBURY, Providence, Rhode Island.

SAMUEL P. NEWMAN, Professor in Bowdoin College, Brunswick, Maine.

HENRY K. OLIVER, Salem, Massachusetts.

ASA RAND, Boston, Massachusetts.

O. A. SHAW, Richmond, Virginia.

ELIPHA WHITE, John's Island, South Carolina.

INTRODUCTORY DISCOURSE

AND

L E C T U R E S

DELIVERED BEFORE THE

AMERICAN INSTITUTE OF INSTRUCTION.

INTRODUCTION DISCUSSION

THE
INTRODUCTORY DISCOURSE
AND THE
LECTURES

DELIVERED BEFORE THE
AMERICAN INSTITUTE OF INSTRUCTION,
IN BOSTON, AUGUST, 1831.

TO WHICH IS ADDED
AN ESSAY
ON THE CONSTRUCTION OF SCHOOL-HOUSES,
WITH PLANS.

PUBLISHED UNDER THE DIRECTION OF THE BOARD OF CENSORS.

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JOURNAL OF PROCEEDINGS.

[The following account of the last meeting of the Institute, we copy entire from the Secretary's Record. There are some items which, if we regard merely their intrinsic importance, might have been safely omitted. We have thought, however, that it would be agreeable to the members of the Institute, to possess a full copy of the Record, and we accordingly publish it entire. CENSORS.]

REPRESENTATIVES' HALL, *Aug. 25.*

THE Institute was called to order by the President at twenty minutes past 9.

The annual Report of the Directors was read and accepted.

Communications were received from Prof. FISKE, of Amherst, and Prof. SILLIMAN, of New Haven, Ct., stating that they should be prevented from giving the lectures before the Institute, to which they had been appointed.

An interesting communication was also received from ANDREW YATES, of Chittenango, N. Y., enclosing twenty dollars, and expressing regret at unavoidable absence from the meeting of the Institute.

The act of the Legislature, incorporating the American Institute of Instruction, was read and accepted.

On motion of Mr. BAILEY,

Voted, That the Constitution of the Institute, adopted Aug. 21, 1830, be the Constitution of the American Institute of Instruction in its corporate capacity.

The following gentlemen were appointed a Committee of Nomination, to select a suitable list of officers for the year ensuing, with instructions to report to-morrow, at 8 o'clock, A. M. viz. REUBEN HAINES, of Germantown, Pa.; JAMES G. CARTER, of Lancaster, Mass.; EBENEZER BAILEY, of Boston; ELIPHA

WHITE, of S. C. ; J. KINGSBURY, of Providence, R. I. ; GOOLD BROWN, of N. Y., and WILLIAM C. WOODBRIDGE, of Ct.

At a quarter before 12, adjourned, to hear the Annual Introductory Address, from Rev. JAMES WALKER, of Charlestown. The next meeting to be held at the Atheneum Lecture-room, this evening, at 8 o'clock.

Friday, Aug. 26.—The hall at the Atheneum could not be procured; and there was, consequently, no meeting of the Institute last evening.

This morning, came to order between 8 and 9 o'clock.

The Committee of Nomination made a report, which was accepted; and 12 o'clock assigned for coming to a choice of officers.

Mr. E. BAILEY was appointed to procure ballots, for the use of the members.

At 9 o'clock, adjourned—to meet immediately after the second lecture this morning.

At 25 minutes past 9, a lecture was given by Mr. DURGIN, on Natural History, as a branch of early education.

At 11, a lecture by Dr. J. JACKSON, on Physical Education.

At a few minutes after 12, came to order, and proceeded to the choice of officers.

Messrs. BAILEY, of Boston,
CARTER, of Lancaster, and
GREENLEAF, of Bradford, Ms.

were appointed a Committee to receive, sort and count the votes. The entire list reported by the Committee was sustained. [See list of officers at the end of the volume.]

The following question, proposed by Mr. WOODBRIDGE, was then discussed; Mr. WOODBRIDGE opening the debate in the affirmative.

“Ought *Athletic Games*, combining exercise with amusement, to be united with *Manual Labor* in the education of youth, as a means of forming and invigorating the body?”

After which the Institute adjourned, to meet at Chauncy Hall, at 7 o'clock in the evening, and resume the discussion.

At half past 3, GOOLD BROWN, of New York, gave a lecture on the Theory of, and best mode of teaching, English Grammar.

At 5 o'clock, Prof. FOWLER, of Middlebury College, gave

a lecture, on the Influence of High Schools and Academies on Common Schools.

Chauncy Hall, Friday evening, Aug. 26.—The discussion of Mr. WOODBRIDGE's question was continued with much animation; and six or seven gentlemen took part in the debate. It was, however, determined, that questions thus discussed should not be decided by vote of the Institute, but that the discussion should be closed at the discretion of the meeting.

The following was then presented by a member, and adopted for debate :—

“An allusion was made in Mr. FOWLER's lecture to the Orthography of Johnson: What standard in Orthography and Pronunciation ought the teachers of the United States to adopt?” The present consideration of this question was waived by the mover, and Mr. BAILEY proposed the following :—“Ought Natural History to be taught in common schools?” This question was accepted, and after some remarks from Mr. FISHER, of Pennsylvania, the Institute adjourned till to-morrow morning at 8 o'clock.

Saturday, Aug. 27. Came to order at a little before 9: soon adjourned to half past 12, to hear the report of the Committee on the Essays (presented for premium) upon the best construction of School-houses.

At 9, J. L. PARKHURST, of Gilmanton, N. H. gave a lecture on the best means of exciting the student to exertion, without the aid of emulation.

At 11, J. HAYWARD, of Cambridge, gave a lecture on the Discipline and Management of Schools.

At 12, the Institute came to order, and heard the report of the Committee on Prize Essays, to which were appended two resolutions,—all of which were accepted.

On motion of Mr. CARTER,

The following gentlemen were appointed a committee to cause to be printed, as soon as convenient, a sufficient number of copies of the Constitution and By-Laws of the Institute, together with a list of the officers of the present year,—viz. Messrs. CARTER, BAILEY, and THAYER.

On motion of Mr. BAILEY,

MESSRS. ABBOTT, of Boston, RYDER, of Dorchester, and GREENLEAF, of Bradford, were appointed a committee to consider and report upon the expediency of making life members of the Institute, those gentlemen who delivered lectures before the Association last year, and furnished copies for publication.

Voted, That the following question be adopted for discussion by the Institute.

“What is the best practical method of teaching English Grammar?”

On motion of Mr. G. F. THAYER,

Voted, That the Institute meet daily at 8½ o'clock, A. M. and proceed immediately to business.

Voted, That the Institute meet on Monday and Tuesday evening next, at half past 7 o'clock.

The committee on Mr. BAILEY's proposition to make the Lecturers of last year *life members*, presented a report unfavorable to the measure, which report,

On motion of G. F. THAYER, was accepted by the Institute.

A communication from FREDERICK EMERSON, stating that it would not be in his power to deliver a lecture on Arithmetic, as announced, was read.

Information was also given by the Corresponding Secretary, Mr. MILES—that circumstances would prevent Dr. BARBER, of Pennsylvania, from giving his lecture on Elocution.

Adjourned till the close of the regular exercises of this afternoon.

At half past 3, Mr. J. ABBOTT, of Boston, delivered a lecture on Moral Education.

At 5, the Prize Essay on the best mode of constructing School-houses—written by WILLIAM A. ALCOTT, of Hartford—was read; likewise, as a useful appendage, a very valuable and interesting communication, on the size of School-rooms, by WILLIAM C. WOODBRIDGE, of Hartford, Ct.

At 6, the Institute was called to order by the Senior Vice President present—REUBEN HAINES—and, after a short discussion, it was voted to meet at Chauncy Hall, this evening at half past 7, to discuss the question, “Ought the Bible to be studied as a branch of popular education?”

A communication was this day received from WILLIAM C. WOODBRIDGE, offering the pages of the Annals of Education for the use of the Institute, to publish any of its documents, &c.—which was read and placed on file.

At half past 6 o'clock adjourned.

CHAUNCY HALL, *Saturday Evening, Aug. 27.*

The Institute met agreeably to adjournment,

S. C. PHILLIPS in the chair.

Question for discussion—"Ought the Bible to be studied as a branch of popular education?"

Which was debated till about 10 o'clock, when the Institute adjourned till Monday morning.

G. F. THAYER, *Rec. Sec'y.*

REPRESENTATIVES' HALL, *Monday, Aug. 29.*

Institute came to order at half past 8 o'clock.

Voted, That JACOB ABBOTT and CLEMENT DURGIN be a committee to report for the public papers the doings of the Institute, from day to day, and to give notice of the order of exercises for the coming day.

The question "What standard of Orthography and Pronunciation ought the teachers of the United States to adopt?" was taken up for consideration. After a few observations from several members, the discussion was suspended, and the following Resolutions, submitted by Mr. WOODBRIDGE, were adopted.

RESOLVED, That it be considered the duty of every member of the Institute, as his circumstances permit, to communicate the results of his experience and observations on the subjects discussed or proposed by the Institute, to the Censors, to be by them published, or referred to appropriate committees, at their discretion.

Resolved, That on Tuesday evening (to-morrow) the members of the Institute be called on to communicate orally, any facts or experiments connected with the subjects of the lectures of the last year.

Adjourned, to meet immediately after the second lecture this morning.

At 10 minutes past 9, Mr. O. SHAW, of Richmond, Va., gave a lecture on Arithmetic, in connexion with an exhibition and explanation of his Visible Numerator. This lecture was in lieu of one from Mr. F. EMERSON—and was prepared, at very short notice, at the request of the committee of arrangements.

At 11, Mr. S. C. PHILLIPS, of Salem, gave a lecture on “the Usefulness of Lyceums, considered in connexion with the influence of the country and age in which we live, upon the condition of man as an *individual*, a *member of society*, a *political agent*, and an *intellectual and moral being*.”

At the close of this lecture, the Institute came to order, and it was *Voted*, That the Secretary be requested to give notice, that the Ladies are invited to be present at the business meetings of the Institute, should they desire it.

Voted, That Mr. ABBOTT be excused, at his own request, from the duty of reporting the doings of the Institute, and that Mr. WOODBRIDGE be substituted in his place.

Adjourned till after the second lecture this afternoon.

At half past 3, W. H. BROOKS, of Salem, gave a lecture on the education of the Five Senses.

At 5, Dr. J. D. FISHER, of Boston, gave a lecture on the education of the Blind.

Monday, P. M. 6 o'clock.

The Institute again came to order for business, when it was—*Voted*, That a communication relative to the Peace Society, presented by THOMAS THOMSON, jun. be submitted to the consideration of a committee to decide whether or not it should be read to the Institute. The following gentlemen were appointed, viz. Messrs. CARTER, WELDON, and OLIVER.

A communication from Mr. A. RAND, offering the use of his paper—the education Reporter—for the publications of the Institute, was read, and placed on file.

Adjourned at a quarter before 7.

CHAUNCY HALL, *Monday Evening, Aug. 29.*

The Institute met for debate. Question, “Ought the Bible to be studied as a branch of common education?”

This question was discussed with great interest and spirit until a late hour, when the Institute adjourned to tomorrow morning, at half past 8 o'clock.

G. F. THAYER, *Rec. Sec'y.*

REPRESENTATIVES' HALL, *Tuesday, Aug. 30, 1831.*

Institute came to order a few minutes before 9: the Board of Directors being in session till that time, prevented an earlier assembling.

The committee on Mr. THOMSON's communication, reported unfavorably to the reading of said paper before the Institute, and their report was accepted.

Adjourned till the close of the second lecture this morning.

At 9 o'clock, a lecture was delivered by GEORGE B. EMERSON, of Boston, on Female Education.

At 11, a lecture was delivered by JAMES G. CARTER, of Lancaster, on the necessity and the most practicable means of raising the qualifications of Teachers of common schools. [This lecture was in lieu of the "Analysis of the powers of the mind which are to be developed in the process of education," which had been announced, but which it was found impracticable to prepare.]

Institute came to order for business, at a quarter past 12.

The following votes, passed yesterday in the Board of Directors, were read to the Institute:—

1. VOTED, *That the several members of the Institute be respectfully invited to communicate such facts relating to education, and such practical method of teaching in any particular department, as may not be generally known or practised: such communications to be directed to the Recording Secretary, before the first day of August, 1832, and by him to be submitted to the Directors.*

2. Voted, *That the members of the Institute be requested to offer, through the Secretary, any suggestions, relating either to subjects, lectures, or any other matter, which, in their opinion, may tend to render the exercises of the next anniversary interesting and useful.*

Half past 3, P. M. August 30.

Institute came to order for the discussion of one or more of the following subjects, which had been previously adopted; viz.

1. The use of emulation in schools.
2. The cultivation of the voice.
3. The introduction of natural history into schools.
4. The orthography of the English language.
5. The construction of school-houses.

The *second* subject was taken up in the following form:—"Is sufficient attention given in our schools to the improvement of the *voice*? If not, what are the means to be employed to secure its greatest desirable perfection?"

After a few observations from several gentlemen, the further consideration of the subject was indefinitely postponed.

The report in part of the Committee on the State of Education, was read, agreeably to a vote of the directors, by whom said committee was appointed. After which, the subject of emulation, in the following phraseology, was taken up and discussed, with much spirit, for the remainder of the afternoon:

"Ought emulation to be resorted to in schools, as a means of stimulating the student to exertion?"

At half past 6, adjourned.

CHAUNCY HALL, *Tuesday Evening, half past 7.*

Institute met agreeably to adjournment, and continued the discussion of the subject of the afternoon, with great interest and animation, until a quarter past 10, when the meeting was dissolved.

G. F. THAYER, *Rec. Sec'y.*

INTRODUCTORY LECTURE.

BY

JAMES WALKER.

INTRODUCTORY LECTURE.

EDUCATION, understood in its largest sense, comprehends all those influences by which the mind is enlightened, and the character formed. A larger proportion of these influences than is commonly supposed, are in their nature contingent or accidental; and are not, therefore, and cannot be included in any plan or system. For this reason I have thought it would be well, gentlemen, to introduce the present course of lectures on regular and systematic education by a few remarks on what may be denominated contingent or accidental education.

I am aware that of late years, a passion for system and artificial arrangements in education has been carried very far; the pupil being made not only to study, but to exercise and play, and eat and drink, and even to sleep by rule, and as much as possible under the eye of his instructors. Adopt any one of these plans, however, and refine upon it as much as you please, and make it extend as far as you can over the time, and motion, and even the thoughts of the child, and still the child will be constantly liable to impressions from accidental causes. Nay more; the impressions thus received from accidental causes, against which you did not, and could not guard, always may and sometimes will determine what is afterwards to distinguish his mind and fortunes. There is no calculating the effect of the slightest as well as most casual circumstances on the opening and susceptible mind, balancing, perhaps, at

that very moment, on some eventful question, and wanting but the weight of a single feather to incline it one way or the other. A word overheard by accident in the streets, the disappointment occasioned by a stormy day, a common story book read in a particular frame of mind, a fit of sickness, the sudden death of a schoolmate, even a remarkable dream—these are occurrences not to be excluded by the modern refinements in education; and yet any one of them is sometimes sufficient forever to fix, or entirely to reverse, a child's genius and prospects.

For obvious reasons the thoughts which are suggested accidentally, and pursued by the child voluntarily, crude and visionary as they will oftentimes be, are yet more likely to affect and determine the character than those taught in the regular exercises. Accidental suggestions not only increase the child's stock of thought, but what is of vastly greater importance, they set him a-thinking; and besides, the thoughts which he receives in this way, are his own, and not another's. It is true we can make the thoughts of other men our own by adopting them and acting on them; but a child will be slow to do this in regard to those lessons he is set to learn as a task, partly because he does learn them as a task, which will be likely to connect them with disagreeable associations, and make their recurrence unwelcome, and partly because when the lessons are recited, he will be apt to suppose the task done and think no more about them. Persons engaged in the business of instruction cannot be reminded too often, that "no complex or very important truth was ever yet transferred in full development from one mind to another. Truth of this kind is not a piece of furniture to be shifted; it is a seed which must be sown and pass through the several stages of growth." Now as in the vegetable world, of the multitude of seeds, with which nature in her profusion strews the earth, not more perhaps than one in ten thousand strikes root, so of the multitude of thoughts suggested or communicated to the child, not more perhaps than one in ten thousand strikes root. Those, however, are

most likely to do so, to which the mind takes spontaneously. Hence it often happens that children at school are more affected in their intellectual as well as moral character, by the society of the place, the personal qualities of their teachers, their conversation with one another, and their own reflections on passing events, than by any thing taught them in formal lectures, or in the books given them to study, or by anything in the peculiar system of discipline or instruction.

This should lead us to put less confidence than most theorists are inclined to do in mere plans and systems of education, however recommended. Of course I do not mean to deny that many important improvements and facilities have been introduced of late years, applicable alike to all systems ; such, for example, as respect the construction of schoolrooms, the use of apparatus, and the character and use of manuals. Neither am I disposed to call in question the actual efficiency of the systems most in vogue at the present day, if with Pestalozzi's system, for example, we can have a Pestalozzi, if with the Lancasterian system we can have a Lancaster, if with Jacotot's system we can have a Jacotot. I believe in the accounts of extraordinary proficiency made under all these different systems ; which prove, as it seems to me, that one system is about as good as another, and that the extraordinary proficiency in the cases mentioned is to be ascribed not to the system, but to the personal qualities of the teacher, and the excitements of a new experiment, or, in other words, to accidental causes.

We must not depend, at least not exclusively, or chiefly, on systematic instruction of any kind for the proper and full developement of the understanding and conscience. Many parents appear to think, that if they spare no expense in the education of their children, if they place them at the schools in highest repute and which are patronised by the best families, if they provide for them the best books and the best instructors, and put them under the newest and best systems of instruction, they have done all which, as parents, they are bound to do, or can do.

They forget how much depends on their own example, and on other domestic influences, going back as far as the personal character of the nurse, and the tales of the nursery; by which the future tastes and dispositions of their children are not unfrequently determined, before they are sent to school. Besides, if it were not so, they are not warranted in looking on certain processes in education as a kind of machinery by which characters can be moulded to order; or in thinking that mind in the hands of the schoolmaster is as marble in the hands of the statuary. They must not forget the original differences in children, and that the human mind from the beginning is essentially free, and that many of its operations, and many of the influences by which it is swayed, are in their own nature hidden, inextricable, contingent. Or, even if they take the ground that character is the creature of circumstances merely, and that it is formed for man and not by him, still as we know but a small part of these circumstances, and have control over but a small part of those which we do know, we can but guess at the final result of our endeavours in particular instances. And experience teaches us that children, especially in the early stages of their moral and intellectual culture, are liable at every step of their progress to extraneous and malign influences, which may traverse and defeat the best laid plans.

Here, as it seems to me, we detect one of the principal causes of the frequent and melancholy failures in education. A merchant, for example, who, beginning with barely learning enough to write his name, has gained wealth and rank, expends a fortune on the training of an only son, in the hope of making that distinction certain in regard to him, which in regard to himself he is willing to attribute, in part at least, to lucky coincidences. This son, however, after being made to pass through the customary forms and processes of what is called an accomplished education, comes out at last an incorrigible profligate and dunce. The father, in the bitterness of his disappointment, rails at schoolmasters, and schools, and systems of instruction, as if they alone had been in fault. If

he would look deeper, and be just, he would find that if he rails at any thing, he ought to rail at prevalent abuses nearer home, or at the general state of society, or at other extraneous and malign influences, for which neither schoolmasters, nor schools, nor systems of instruction are responsible. The common prejudice that our public schools and colleges are places where the virtue of lads and young men are in much greater danger than in other situations, is, as it seems to me, without foundation. So far as my observation extends, I do know, that, as a general rule, those children out of the same family who have been educated at the university, have become more distinguished for their sense of character, and their enterprise, than those who have been otherwise employed. Even when through the influence of wealth, or other temptations, all have become dissipated and licentious, the former have not commonly sunk so low, nor become so gross. I am fully convinced, that the standard of morals and industry in most of our public seminaries is as high, nay, higher than in the community generally, and about as much higher as in the nature of things we can expect it to be.

Admitting, however, that, as things are, failures in education are generally attributable to extraneous and malign influences, an important question arises, whether it is not possible to do much more than has yet been done or attempted, to correct or shut out these influences.

No plan for excluding these influences by founding a school, in which the students shall be interdicted all intercourse with the world on rigid monastic principles, would be practicable in this country; nor desirable if practicable. Theorists have sometimes contended that much must be gained by allowing the mind to attain strength and maturity, before it is put to its first trials. This, however, as it seems to me, would be to counteract one of the wisest arrangements of nature, according to which every individual is exposed to temptation gradually, and to one temptation after another, as his susceptibility to it is developed, and is not thrust on a multitude of new tempta-

tions at once. Others, again, have argued that it must be a great advantage to children to have an opportunity to study their parts, as it were, in private, and to become familiar with them by frequent rehearsals, before they are called to act them in public. It will always be found, however, I suspect, that the formal lessons taught in an institution like the one to which I am now referring, and even that the experience and discipline which its inmates may derive from their own conduct, or from their intercourse with one another, in a state of society so artificial and constrained, will have hardly any influence in preparing them for real life. Besides, shut out the world as effectually as you may from your pupils, you cannot shut out a knowledge of its existence, and that they will mingle with it freely hereafter; neither can you prevent them from dreaming about what they will do and become; and they will be about as likely to be corrupted by the world as it exists in their imagination, as they would be by the world as it exists in reality.

Others, not satisfied with the world as it is, and despairing of being able to exclude its influence in education, have thought to make a world for themselves by an entire reorganization of society on scientific principles. This is Mr. Owen's plan, and it is amusing to find with what confidence he speaks of its feasibility, nothing being necessary, according to him, but to cut up a country into parallelograms, introduce a community of interests, and apply his boasted science of circumstances, and the system must work, to use his own words, "with the certainty of a mathematical procedure." For a time his establishment at New Lanark did succeed, being animated by his own indefatigable spirit and his various contrivances being recommended by the charm of novelty, christianity also being recognised, and the morals of the place being under the influence of religious sanctions and institutions. But his total failure at New Harmony seemed like the derision and scorn with which nature herself will never fail to pursue the pretended reformer, however well meaning, who thinks to interfere

with her established processes for the developement of the human faculties without acknowledging the mind's essential freedom, its spiritual and immortal element, and its relationship to the divinity. M. de Fellenburg's establishment at Hofwyl is not liable to this objection, and considered as an asylum for destitute orphans, and the children of the profligate poor, for whom alone it was originally designed, it is difficult to speak in exaggerated terms of the noble charity. At the same time we must not form our judgment of the practical tendency of such institutions from their appearance on paper, nor from the manner in which they strike an occasional visiter, nor from the success of a single and a first experiment. It is obvious that almost every thing depends on the personal qualities of the superintendent, and that these again depend not a little on local and temporary excitements, which would inevitably decline should these, or similar establishments become common. It also deserves attention that the abuses in such establishments consequent upon a decay of zeal and fidelity in the superintendence, must be much more injurious and extensive than any to which schools conducted on the usual plan are liable.

On the whole, I do not believe that much is to be expected from artificial arrangements to exclude or regulate the influence of incidental or extraneous causes in education. Facts, I conceive, have put it beyond controversy that children in well ordered families are brought up with as little exposure in large cities, as in retired villages, and in the open world as in cloisters, or gardens. At any rate, I feel sure that no security or advantage to be derived from seclusion, or an artificial arrangement of circumstances, will compensate for the loss a child must incur in being torn at a tender age from the influences of a virtuous and happy home, and from the eye and care of those whom God has constituted his guardians, with affections and powers and responsibilities, which they may cast off or disregard themselves, but cannot delegate to another.

Instead of vainly attempting to exclude all extraneous influences, or dictate what these influences shall be, the great ob-

ject of education, as it seems to me, should be to fortify the mind against them, and to watch over and correct immediately the bad biasses it may from time to time receive from them. Our aim should be to form or alter the mind in respect to circumstances, and not circumstances in respect to the mind. Human nature, they tell us, is always and every where the same ; a proposition which may be true enough if understood simply to mean that man is always man, and not man to-day, and horse, or elephant, or crocodile, tomorrow. But if it is intended to insinuate that man, as man, is always, and every where the same intellectual and moral being, to be affected in precisely the same way, and in precisely the same degree, by the same circumstances, the error is so palpable and so contradictory to every day's experience, as scarcely to deserve a formal rejection. We have heard a great deal too much, of late years, from smatterers and sciolists in philosophy about the power of circumstances, as if this power did not depend solely on the susceptibilities of those on whom they operate, and as if these susceptibilities were not themselves susceptible of change by education and self discipline. It is not true that man is the creature of circumstances unless you include in these circumstances his own faculties and susceptibilities, and the state of his mind for the time being ; or, in other words, unless you include in the circumstances the man himself.

To guard, therefore, against the interference of accidental causes in the cultivation of the mind, it is necessary, in the first place, to prevent or correct any affinities in the mind itself to error or vice. A single spark is not dangerous unless it fall among combustibles. The maxim that to the pure all things are pure, should encourage no one, I am aware, to expose himself to temptation wantonly, or for any length of time, or to a series of temptations, in the belief that he can do it with impunity. Still if a single chance suggestion, a glimpse, a thought, have the effect to turn aside the mind materially from its course, it must be because it was previously more than half inclined to transgress. A child's preferences may sometimes,

however, be right, I will allow, and yet for want of the necessary firmness and constancy he may be driven this way and that by a thousand contradictory impulses. He wants power, which it is the province of education to impart ; of that education which ought ever to proceed on the incontestible principle, as I regard it, that the same God who has made us responsible for the use we can make of our powers, has made us capable of extending these powers almost at will. By faith in the capacities of his own nature, by a wise and patient self-discipline, by crushing, together or in detail, those lusts and passions which make him a slave to his senses, by cultivating a knowledge and love of every thing that is noble and praiseworthy, and above all by frequent communing with the eternal fountain of all energy, he may be, and he must be inspired with an invincible strength and resolution.

I have said, and I believe, that with the best systems of education the only security against disturbing influences from without is to be found in the mind itself ; in strong virtuous preferences, in firmness and constancy to follow out these preferences, and in the consciousness of a high vocation. This, after all, as it seems to me, is the great touchstone of character. If a child is able and willing to go through a long, painful and often discouraging course of preparation, sustained throughout by the hope of a distant and glorious reward, we may expect something from him. But if he has not acquired, and does not acquire this power, if he is only capable of occasional and desultory action, even though it be powerful action, he is marked for inferiority as certainly and irreversibly as if his Maker had stamped it on his forehead. Success, ultimate success, in whatever a man undertakes, depends almost entirely, yes, I believe I may say, almost entirely on forecast and perseverance, on that peculiar constitution and training which disposes one in the first place, to mark out for himself the course he will pursue, and then fires him with a resolution to follow it up, or die. He should be taught not to find his qualities in his circumstances, not to look in other

men's faces for his opinions and principles, but to find them in the depths of his own soul. There is much in the doctrine held by some religionists, that a noble character is to be formed from within, outward, and not from without, inward. A legitimate and paramount object in education, so far at least as character and success in life are concerned, is to make men independent of circumstances, and where this object is neglected or compromised, almost every thing, as it seems to me, is thrown up to chance. So far as human agency and foresight are concerned, the final result becomes a contingency dependent itself on a thousand other contingencies.

At the same time it is proper to observe, that the progress of civilization, and the diffusion of useful knowledge among all classes, must operate to lessen the danger to be apprehended from this cause. The wonder is sometimes expressed, that Socrates, the philosopher, could be so weak as to direct in his last moments, that a cock should be sacrificed to *Æsculapius*; and that Lord Bacon, the father, or at least the restorer of experimental science, should have lived and died in the popular belief of witchcraft and apparitions. The truth is, that on all great and stirring subjects there is a communion and sympathy between the strongest and most cultivated minds, and the mind of the mass, so that to educate a part of the community with any certainty of success on these subjects; the whole must be educated. There is, moreover, in every community a certain proportion who do well, a proportion which does not vary much from year to year, and may be regarded as an exponent of its moral condition. This proportion must be expected to pervade every seminary of learning from the university down to the infant school; and of course, the standard of education will be determined everywhere by the moral and intellectual standard in general society, and will rise with it. I may also be permitted to mention in this connection an important purpose answered by our public schools, tending to lessen the power of mere accident over the destinies of individuals. I believe that the amount and value

of the instruction actually communicated in this way, is commonly overrated ; but it is clear that enough must be imparted to every one, even in the humblest classes, to enable others to see, and himself to feel, for what he was intended by the Creator. Thus the developement of genius, the striking out of the sacred spark, is not left to depend, as it otherwise might, on casualty alone.

The views here presented do not make the duties of professed teachers less important and necessary ; though they make them more complicated and arduous. "Schoolmasters," says an old English divine, "have a negative on the welfare of the kingdom." They may be said to create a republic, and the time has come when under institutions like ours, we could no more dispense with the profession, as a distinct profession, than we could with that of the ministers of justice or religion. Neither would I be understood to deny that much benefit has accrued from the introduction of new and better systems of instruction. It is with most of these, I believe, as with systems of religion ; each one aims to recommend itself by the distinctness and prominence which it gives to a single beautiful thought or principle. It is well perhaps that new systems should be continually coming and going, and that each in its turn should find enthusiastic supporters. A teacher who believes in the marvellous virtues of his system, will sometimes derive from this circumstance alone a zeal and confidence and assiduity, which though founded in illusion must make his success almost certain.

After all, however, almost every thing depends as I have said on the personal qualities of the teacher. It is never to be forgotten that dullness and stupidity are as contagious as vice, and that genius and enthusiasm are not taught but communicated. "The schoolmaster is abroad," and the augury has been hailed every where by the friends of liberty and humanity as full of hope and promise. This hope and promise are made doubly sure, when we behold the well directed efforts which are made to elevate the profession and qualify

every member of it for his sublime vocation, the training of the immortal mind. Who can despair of the progress of correct principles and free institutions, who can despair of the prospects of the race, when we behold so many men, and so many women, of gifted minds, penetrated with a sense of the responsibilities of the office, and profoundly versed in the laws by which the forming and expanding character is affected either for good or evil, giving themselves to the work of training the rising generation to the knowledge of truth, the love of virtue and a sense of the divinity?

Gentlemen, I congratulate you on the part which you are called to take in this holy enterprise. I congratulate you on the opportunity put into your hands of rearing a monument to your useful services more imperishable than brass or marble, in the living and immortal spirits which you may be the means of delivering from the dungeon of their own ignorance, and crowning with the light and liberty of the sons of God.

LECTURE I.

ON

THE EDUCATION OF FEMALES.

BY

GEORGE B. EMERSON.

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EDUCATION OF FEMALES.

THE subject of the education of females embraces, in its widest extent, whatever relates to physical, moral and intellectual education, with the exception only of what belongs to an education strictly professional. Into this broad field it is not my intention to enter, except so far as to inquire what are the subjects to which it is most important that the early attention of females should be directed, and to what extent their education should be carried.

Education is a preparation for the future; and we shall best learn what preparation should be made, by inquiring what that future must be, what are the relations which will arise, and what duties will follow from them.

Woman, the daughter and sister, is destined to become the companion, the friend and wife. These social relations belong to her equally with man, and her interest in them is greater. Removed from the agitations of ambition and business, they constitute a larger and more important portion of her life. But she has a higher destiny; she is to be a mother, and to form the heart, the character and the mind of her children. These are the relations which are usually taken into consideration, in regarding the life of a woman.

But independently of and previously to these relations, let us consider woman as she is in herself, as a solitary, intelligent being. It is possible that she may sustain few relations to others, that her life will be spent in complete seclusion. Shall she

therefore make no preparation for life? Because it is of little importance to others, is it of no consequence to herself? Shall she know nothing of the powers that are within, and of Him who is above and about her? Shall the earth utter no voice, and the heavens be silent to her?—Were it possible for a woman to be thus set apart from all others, she would still have sufficient reason to prefer the existence of a thinking being to a mere animal existence. But the advantages of intelligence and thought cannot be possessed any where, and still less in solitude than elsewhere, without the materials, the power and the habit of thought. The materials are as vast and various as the visible creation and the events of providence can suggest. But the elements of the natural sciences must be communicated, the susceptibility of receiving agreeable impressions from beautiful objects must be excited, and the taste must be cultivated, before the charms of external nature can be felt and comprehended, and its objects furnish fit materials for thought.

Except in a few of the most highly gifted minds, the habits of observation and of thought must be formed by the gradual process of discipline. The savage seems to derive little pleasure from the examination of the most curious object of nature, which to the cultivated *child*, would be a source of admiration and delight; and in proportion to his ignorance, each person approaches the condition of the savage.

In our country it rarely happens that any individual spends her life in this isolated state. But every female must spend a portion of her time in solitude, and by many a large portion must be thus spent. She is always not only a social being, but a contemplative one, whose mind is to be stored with high and pure thoughts, a fund for happiness and elevating meditation in those hours which are devoted to the retired and silent duties of her station. But we return to the social relations.

The first and necessary relation of woman is that of daughter. From this relation numerous duties arise, for the performance of which every woman should be educated. A daughter is the natural companion, friend and stay of her parents. A man leaves his father and mother, and marries into

the family of his wife. But in our own and other free countries, a woman, whether single or married, more frequently remains, with her earliest affections, in or near the mansion of her parents. It is to her that they naturally look for the tender attentions which will soothe them in their declining years. It is for her to temper the rough winds of adversity, and render brighter the sunshine of prosperity. She is their comforter, physician and nurse. When their voice has become tremulous and their eye dim with age, and the stores of memory have been closed, it is for her to bring forth the treasures of consolation, to make the sound of gladness still be heard in their dwelling, and to fill it with a cheerful and if she have been rightly educated, a holy light.

Do I overrate the duties of a daughter? And is it necessary to ask whether it is by a transient and superficial, or by a generous and extended education, that the heart shall be formed to feel, the mind to conceive, and the hand to execute such duties?

I need not speak particularly of the relation of sister; not that I undervalue the importance of her duties, but because I believe that the woman who is well educated for the more important ones of daughter and wife, cannot fail to be a faithful sister and friend.

We come next to the relations which arise from the institution of marriage, and in treating of them I shall speak of those duties only which belong to a mistress of a family and a mother. We have time merely to glance at the numerous duties of mistress of a family.

Enter the humblest dwelling under the prudent management of a discreet and well educated female, and observe the simplicity and good taste which pervade it. The wise mistress has nothing gaudy in her dress or furniture, for she is above the silly ambition of surpassing her neighbors in show. Her own best ornaments are cheerfulness and contentment, and those of her house are neatness, good order and cleanliness, which make a plain house and modest apartments seem better than they are. She has not the selfish vanity which would make

her strive to appear above her circumstances. She knows what are and what ought to be the expenses of her family, and she is not ashamed of her economy. It gives her the means of being liberal in her charity, and hers is a charity which reaches round the earth and embraces the poor and unfortunate every where. Her domestics, if she have any, look to her for advice in doubt, and counsel in difficulties; they respect her judgment, for she has shown herself wise and disinterested; they see that she cares for them, and they have felt her sympathy in their sorrows; in return they make her interest their own, anticipate her wishes, and show the willingness of their service by their cheerful alacrity.

She knows the virtues of pure air and the excellence of scrupulous cleanliness; she can judge of the qualities of wholesome food, and knows how easily it may be poisoned by careless or unskilful cooking. Her knowledge and care shine in the happy and healthy faces of her children. No harsh sounds are heard in her dwelling, for her gentleness communicates itself to all around her. Her husband hastens home, and whatever may have been his fortune abroad, enters his house with a cheerful step. He has experienced the pleasure of seeing kind faces brightening at his approach, and contented with what he finds at home, has no inducement to seek for happiness abroad. Nor is she satisfied with consulting the present gratification of those around her. By her example and gentle influence, she leads them onward to what is better and more enduring hereafter. Few know the noiseless and real happiness which such a woman sheds around her, as if she were the sun of her little world.

Most of the excellencies which are implied in this character may be considered prudential. They are not the less moral virtues, and they would be the natural fruit of a wise and religious education. There is no station in which they might not be cultivated, nor in which they would not promote happiness.

The highest relation which a woman can sustain is that of mother. To the mother is in a great degree committed the

formation of the physical, moral, intellectual and religious character of her child.

1. She must, in the first place, superintend the developement of the physical energies of her children. Shall this curious and complicated frame be always committed to those who know nothing of its structure? Can the frail creature be reared to health and strength and beauty by one who understands nothing of the body in its healthy state nor of the appearance and consequences of disease?—There are periods and diseases in childhood, in which, if the eye be improperly exposed to light, vision may be distorted or impaired. Unwholesome food or wholesome food in improper quantities and at unsuitable times, exposure to a current of air by day or to the open air by night, at certain seasons,—all these and a thousand other causes, which many persons learn from bitter experience in the course of life, but which few know before they have suffered from their ignorance, may and often do lead to maladies, or what are called constitutional infirmities, sufficient to poison the sweet current of life for years. How much might not be done to form the voice to proper articulation and utterance, to quicken the sight and hearing, and to give more perfect training to the senses and the limbs, at an age at which comparatively nothing is done.

2. It is in infancy and early childhood that the various propensities exhibit themselves and the moral habits are formed. Most of the virtues are partly habits and partly principles, and where the habit already exists, the principle is most easily implanted. This is not the place to make a catalogue of the virtues; it will be sufficient to make mention of a few of the most essential, of which the habit might and should be formed almost from the beginning. Respect for truth, the most vital of all principles in the human character, must be inculcated and formed as a habit, long before the full perception of right and wrong is awakened. If not formed then, the finger of God alone can form it. If a child be allowed to grow up in the habit of concealment, duplicity and falsehood, his case is

almost hopeless. The whole heart must be changed before the deep poison can be washed out. Of the like nature are frankness and obedience. Gentleness and modesty also are doubtless in a great measure habits, which can be formed only by the influence of a gentle hand. Cheerfulness, too, a habit as well as a gift, I need not say how precious to its possessor, may be gradually and imperceptibly created in early years by the constant influence of cheerful looks and voices. It would be unnecessary and superfluous to dwell on what are most obviously habits, such as neatness, the love of simple pleasures, and of order. These may be formed later, but are then apt to want the charm of naturalness.

It will easily be admitted that these habits are important. Can it be imagined that they will often grow up of themselves under the hand of a mother who is indifferent to the truth, who is wanting in gentleness, cheerfulness or modesty, who has never herself been taught the value of neatness and order, and who hates the very name of simple pleasures? Or if she have been taught to value them, will these habits ripen in herself at the very moment when she finds it her duty to form them?

3. To a mother also is committed the intellect of her child. On her, more than on any other individual, it will depend to awaken the various faculties at their right season and in just and harmonious proportion. The relation between the mind of man and the universe in which he is placed by the Creator of both, is established for wise purposes which it becomes us to inquire into and reverence. They are laws of our existence. The child opens his eyes to the light, in the midst of objects on which he is to act and which are to act on him during life, and there is enough in them to give full play to all his powers. Is it to no purpose that he is so placed, and are we at liberty to disregard these indications of his destiny? The discipline of the moral powers begins with the first dawn of perception and is never intermitted. Not a look nor a tone is without its influence. Those who have observed most attentively,

have thought that the discipline of the mental powers begins not much later. Curiosity is active, the attention is excited, the memory is exerted, before the first word can be pronounced. How soon after do eager looks and questions show that mind is already busy. Then it is that the wary care of a mother is necessary to give a right direction to the active powers, to gratify and stimulate the curiosity, to direct the attention, and to guard against false prejudices. The innumerable questions which a sensible child asks, demand an answer; his mind turns, with intense earnestness, upon the objects spread about him upon the beautiful earth. A true and reasonable answer delights the little questioner, and prompts farther inquiry. Imagination and reason spring into action; and the child rises from the real world into the ideal and possible. Then commences the great investigation of causes, the instinct of which God has implanted in the soul of his rational creature, to lead him up to the *first* cause. Answer his questions aright, gratify this instinct of reason, indulge him in this luxury of inquiry, and you make him feel the delights of rational existence; he becomes an intellectual creature. Or, on the contrary, meet his ardent gaze with a look of cold indifference or stupid ignorance, show him that you know not or care not for the subjects of his inquiries; turn him away from the bright regions of reality and thought which were opening upon him, with the pain of repulse and disappointment,—you have quenched the divine spark perhaps forever; henceforth to him a veil almost impenetrable is thrown over what is most beautiful and exciting in the physical and the moral world.

A primrose by the river's brim,
A yellow primrose is to him,
And it is nothing more.

No one, who has lived with an inquisitive child, will say that a small amount of knowledge and little thought are sufficient to enable you to answer, satisfactorily to yourself and to him, his innumerable questions as to the properties, uses,

and causes of all he sees. Will any one say that they are not to be answered, and that slight preparation of study and discipline need be made by the mother, to enable her to watch the first dawnings of reason, to foster and train the various powers, and to supply at right times and suitably the materials for their growth?

4. But a still higher office is committed to the mother. It is for her to form the religious character of her child. It has been observed by those who have had charge of deserted orphan children, that upon one who has never felt the influence of parental care and affection, it is extremely difficult to impress an idea of the paternal character of God. A mother's love is necessary to prepare the affections, and it is on a heart subdued and softened by maternal kindness that the soft rain and gentle dew of religious instruction should distil, and the seeds of a religious character be implanted. I need not say how easily, on a heart so prepared, the idea of a kind, watchful, protecting, earthly parent may be expanded into a conception of the infinite benevolence, watchfulness and protection of a father in Heaven. The *fear* of God may be impressed afterwards. But the perfect love which casts out fear grows naturally only in the bosom of a child. Then may an idea of God be implanted which shall be associated with whatever is grand and beautiful and happy, which shall not come as a spectre, to haunt the dreams of night and sickness, but shall be an ever present spirit, guiding in the paths of truth, sustaining in weakness and temptation, and protecting from every form of evil. A child may be taught to know himself, to understand something of the spiritual nature of his soul, to examine his motives, to feel his own weakness, to guard against sin from within and from without, to subdue his passions, to respect the superior authority of his conscience as of the image of God within him, in short, to distrust and yet reverence himself. This may be done and ought to be done. Of how little value is all the rest of education in comparison with it. It can be done only by a mother who is sensible of her spiritual na-

ture, who feels the greatness of her charge and her responsibility. It is only such a mother, who will consider the invitation to her child—come unto me early—as a command upon herself to bring him.

I have, for the sake of distinctness, considered the various duties of a mother as independent of each other. In truth they are not so. The character of a man, however compound and complicated, is one, and should be formed under the uniform, controlling influence of one mind. The manners, habits, morals, mind, are but different elements of the character, dependent on each other, and parts of one whole.

I have dwelt on the duties of a mother as among the most important which can belong to the female. Every woman should therefore be educated with reference to these duties. In our country, nearly every one is destined to have the care of the early education of her own children. To those who have none of their own, the children of the incompetent from ignorance or vice, of the extremely poor, and those who have lost their natural protectors, look for parental attention. The gentleness and patience of the female character clearly indicate the intention of Providence in this respect; and the happiness which is communicated and received in the faithful discharge of this benevolent office, while it confirms the intention, is an ample reward for the exertion.

But woman's duties extend beyond the limits of her own family, and her benevolence is not confined to the care of children. She is also a member of society. What are the duties which belong to her as such?

A common but inadequate interpretation of the law of Christian benevolence, limits it to the advancement of the permanent good of others, omitting the inferior but not less binding obligation of contributing all in our power to the immediate enjoyment and happiness of our fellow creatures. Assuming the wider and more worthy as the true exposition of the golden rule, we may infer that the social duties of an individual are two-fold, the first leading him to seek the lasting good,

the second to promote the present happiness of those by whom he is surrounded. Omitting the consideration of the former of these, and confining myself to such a view of the latter as applies peculiarly to females, I say it is the duty of every woman to use the talents God has given her, to promote the immediate happiness and enjoyment of the circle of which she is a member. Of the modes by which she may do this, I shall consider only conversation and what are called accomplishments.

The peculiar facility with which highly educated females learn to excel in the art of conversation, has often been remarked. The hilarity, ready sympathy, and desire of pleasing, which are natural to woman, are intimations not to be mistaken of her Creator's intentions. The charm of easy, various, cheerful, refined conversation is too universally felt to need to be described. Whatever of excellent or curious can occupy the mind of man may naturally be made the subject of conversation. A woman often has it in her power, without departing from the modesty which is her greatest charm, to lead conversation to the most elevated and interesting subjects. She might always have, among persons of the slightest civility, that of turning it away from whatever is impure, disagreeable or unprofitable. When gracefully and skilfully used, it might be not only the means of present gratification, but the vehicle of instruction of the most permanent and ennobling kind. Is it unreasonable to say that special preparation should be made for the acquisition and exercise of this delightful art?

The accomplishments are sometimes regarded, as the name intimates, as giving the last touch and finish; and to which almost any thing else in a female's education may be sacrificed. Sometimes, on the contrary, they are looked on as trifling and valueless, wholly unworthy of the attention of an immortal creature. Truth, as usual, lies between. They may be misused, but they also may be sources of innocent and elevating pleasure to the possessor and to others. God has bestow-

ed on woman an ear and a voice which enable her to utter sounds of exquisite music. He has constituted the air an elastic medium adapted to wafting these sounds, softened but unimpaired, to a distance, and nicely adapted to the vibrations of sonorous bodies, which he has formed, and which he has given man intelligence to shape into various instruments. Shall it be considered a perversion of the Maker's purposes, for woman to perfect herself in an innocent art, by which she can worthily praise God and gladden the heart of man?

So with drawing. The eye may be trained to a quicker perception, and the mind to a more perfect taste and comprehension of the beautiful and grand in nature, by a course of instruction. The hand may be made a fit and ready minister to record or execute the conceptions or observations of the mind. Shall an art which thus opens to its possessor new sources of gratification, and enables her to transmit to an absent friend a conception of a fine scene, and to enrich her home with the beauties of the mountains and waters of distant lands, be condemned as trivial and frivolous?

Accomplishments are too apt to be cultivated for the purpose of rendering their possessor an object of attention for a brief period; and when they have served this purpose, they are too frequently thrown aside as of no farther use. Why should it be so? When a woman has found a home possessing too many attractions to leave her the wish to wander from it, why should she not add to them permanently those of her early accomplishments? They are not less pleasing to tried friends than to transient admirers. They may be retained to cheer her own solitude, to enliven and compose the spirits of her husband and children, and to gratify her friends. And when friends shall have departed, and life is wearing away, and the senses are beginning to fail, the accomplishments of her youth may be the solace of her age.

Men meet in the social circle, to be innocently, agreeably, happily and profitably occupied. The stores of each should be contributed for the benefit of all. Each one is under a tacit obligation to do something for the common improvement, and

he who has not a treasure of wisdom from experience, observation and study, by which to enlighten, can at least produce his native talent, to entertain and delight.

I shall notice a single other social relation in which woman is placed, which brings its duties and requires provision for their fulfilment. It is that of instructor. A great part already, and it is to be hoped that a greater part hereafter, of the business of instruction in schools, must be performed by females. Every thing indicates the natural adaptation of the female character to this vocation. In the present constitution of society, it is the only profession which is open to women; for this then let ample preparation be made.

In the last place woman is immortal. She has relations to the Being above us and to the future life, of inestimable importance and endless duration. The peculiar relations of the present existence, all which constitutes a difference between the sexes, will cease in that state where they are not married nor given in marriage, but are like the angels in Heaven. Every being who comes into existence with this immortal destiny, should alike be educated for immortality. This should be continually kept in view, from the beginning, through every stage. If we are immortal, and if we are to be rewarded according to the use of our talents, if our capacities for happiness hereafter are to depend on the cultivation they receive here, of what unmeasured value is whatever tends to form the powers to greater vigor, and prepare them for their never ending action.

I have thus rapidly surveyed some of the most important relations and consequent duties which belong to the life of a female. We have now to consider what course of discipline and study is necessary to prepare for them.

In order that the mind may act vigorously in any given situation, it is necessary that it should have something to act upon, the power and habit of acting, and a medium by which to act. These are all equally indispensable. The accumulation of facts and conclusions, the acquisition of language, and the

training of the faculties, form then the three leading objects of education. In regard to these, it is unnecessary to discuss the question of priority ; they are almost inseparably connected. Whatever exercises the faculties, strengthens them, and facts and language cannot be acquired or retained without the exercise of attention, discrimination and memory ; and these and the other powers cannot be disciplined unless they be employed in the acquisition of facts and language. The objection, then, which is sometimes made to certain studies, that they serve only to acuate and strengthen the powers, is futile. There are no such studies. It is however readily admitted that some studies have this effect, more fully than others, and that some exert it in an imperfect manner.

The studies which are best suited to the mind in its earliest stages are indicated by a thousand intimations. The volume of nature, with its infinite variety, is spread out before the opening eye, every page teeming with interest, inviting and rewarding inquiry. Towards this the young heart leaps out with a native and energetic fondness, which all the perverse influences of a bad education are hardly sufficient to repress. Every object is full of beauty, every sound has an echo, in the heart of a child. Is all this to no purpose ? Shall the harmony between the world without and the unperverted affections, teach us no lesson ?

Natural History, thus distinctly pointed at, is the study best suited to the exercise of several powers of the mind, furnishing a vocabulary of the words of most constant use, and supplying a knowledge of facts which are so far essential, as they are at the foundation of all the common business of life, of several of the sciences and of most of the useful arts. - In its various branches it affords room for the play of every diversity of taste. Its simplest elements are level with the meanest capacity, and can be grasped by the weakest hand. Its exhaustless abundance fills the most mature mind and taxes the strongest. Some of its departments are more peculiarly suited to the restlessness of children than others. The colours and

fragrance of flowers, the graceful shapes and motions of animals, are a natural recommendation of Botany and Zoology. The little variety in the minerals of a single district, and the extended researches necessary to find them, point out a more remote period of life for Mineralogy ; while the vastness of the views and the uncertainty of the conclusions of Geology, shows that it should be reserved for an age still more mature. These studies may be begun at home, continued at school, and perfected in after life. They may be taught by conversation, or by books, in the fields or in the school-room.

When provision is made for a knowledge of the names, properties and uses of natural objects, in which all should be instructed, the mind will be prepared for examining into their composition and mutual action. Chemistry and Natural Philosophy come thus in the logical order after Natural History. I shall not labour to prove that every well educated person, especially one who is to have charge of children, should be well acquainted with the nature and composition of water and the atmosphere, and the action of heat and light. All probably are ready to admit that these are most worthy objects of study.

The structure and general economy of animals and plants, are equally wonderful, and the knowledge, especially of the economy of the human body, is not less important to females. To them is necessarily committed the charge of the body, in health and in sickness, during life. How many lives would be saved, and how much unnecessary anxiety and trouble would be avoided, if they were qualified to decide prudently, when alarming inroads were threatened upon the health, and the aid of a physician became necessary. Nearly all naturally strong constitutions might doubtless be kept in continual health, and many weak ones made strong, by skilful care on the part of a mother. The seeds of numerous diseases are now sown, in consequence of imprudence arising from ignorance. Are consumption, dyspepsia and rheumatism evils of so trifling a nature, that a little pains shall not be taken to gain the know-

ledge which would often enable a mother to guard against them? Let it not be said that this knowledge is out of the reach of women, and that the studies are too foreign from their habits and taste. The effect of heat and cold and moisture, upon the system, the suitableness of various kinds of food, what is essential to the healthy action of the lungs and of the skin, the functions of the various organs, are as easily learnt as the principles of arithmetic, and when learnt they will hardly be forgotten.

These studies, moreover, are not only important but delightful. Nothing is more worthy the attention of a thoughtful, reasonable being than the fearful and admirable structure of his own body; and nothing can be better suited to gratify the natural instinct for the wonderful. It is a great mistake to suppose that there is any thing in itself disagreeable in the sight of the frame work and organization of the human body. That it is thought to be so is one of the prejudices of perverse education. I have never witnessed a gleam of more earnest curiosity and delighted satisfaction than shone on the face of a child, whose mind had been guarded against these absurd prepossessions, when allowed to examine the bones of a beautifully prepared skeleton, and have their action and uses explained to him. Nor is it a small advantage of the study, that it raises a woman above the weakness of vulgar fear, and leads her to regard with interest what is intrinsically interesting. And if it is an advantage derived from any part of natural history, that it gives us worthy conceptions of the benevolence and superintending care of the Creator, it is still more strikingly the tendency of a knowledge of the anatomy and physiology of the human frame.

Vegetable Physiology, though less important, is but little less interesting, and both form the proper foundation for the study of Natural Religion and their analogy with the revealed manifestations of God's will. These are a subject suited to the mature strength of the human mind.

If a knowledge of the book of nature be of such value, and such

care and pains should be taken to gain possession of facts which may furnish materials for thought and action, for a few years, what preparation should not be made to understand the Book of Revelation, from which alone we can learn the rule of our life, our nature and destiny, and the character of God. Containing truths of such vast consequence to all, coming from high antiquity, written in languages most remote from ours, among strange nations, in distant regions and in states of society which have long ceased to exist, one would suppose that the study of the Bible would be considered as among the most important and considerable parts of the education of every Christian; that the languages, the history, the customs, the geography, of the land from which Christianity came to us, would be looked upon with a deep and earnest interest, commensurate with the importance of its communications to man. We rejoice to hope that this will sooner or later be the case, and that teachers especially, will regard it as a most momentous part of their preparation, to qualify themselves to understand the Scriptures, and to read at least the dialect in which the New Testament was written.

A second great purpose of education I have stated to be to form the language. It is usually thought that the acquisition of language is of less consequence to females than to men, who are destined to the duties of writing and public speaking. But when it is considered that the superintendence of the first formation of the voice, pronunciation and vocabulary of every individual, falls to the female, it ceases to be of little consequence how she is trained to communicate the sweetness, compass and variety of her native tongue. It is then a question of considerable importance how she shall be taught language in the most compendious and perfect manner. It is impossible and unnecessary for me to go fully into this question. I can attempt to do little more than state my conviction, that whenever it can be done, a foundation for the study of language must be laid in the study of the Latin. I would recommend this even when the chief object is the English language, and

when the intention is to learn the languages of the South of Europe, the importance of it is still greater, even on the ground of economy of time. A few facts will make this apparent.

The Latin language retains a characteristic of its mother Greek, in forming many words from a single root, by composition with other elementary words, which are usually monosyllables expressive of the simplest relations of space. These are easily learnt, and when prefixed to another word, give it a new signification partaking of the meaning of both its roots. The word *pono*, for example, compounded with the five syllables *con*, *de*, *in*, *ob*, *sub*, forms a great number of words, from which are derived not less than twenty English words* the meaning of all of which is immediately obvious to one who knows the six simple words from which they are made. The addition of five other elementary words increases the number of derivatives from *pono* to as many as thirty in our language. From the word *ludo*, and nearly the same elements, are derived twenty four English words, from *duco* more than thirty, and from *mitto* and from *scribo*† more than thirty; in the

* From *compono* are derived—compound, compose, composition, component, composite, compositor, composure, compost; from *depono*,—depone, deponent, depose, depositary, deposition, deposit, depositor; from *impono*,—impose, imposer, imposition, impost, impostor, imposture; from *oppono*,—oppose, opposition, opposite, opponent, &c.; from *suppono*,—suppose, supposition, &c.

† From *scribo* are derived—scribe, scribble, scrip, scripture, scriptural; from *ascribo*,—ascribe, ascription; from *circumscribo*,—circumscribe, circumscription, circumscriptive; from *conscribo*,—conscript, conscription; from *describo*,—describable, describe, description, descriptive; from *inscribo*,—inscribe, inscription; from *prescribo*,—prescribe, prescriber, prescription, prescriptive; from *proscribo*,—proscribe, proscriber, proscription, proscriptive; from *rescribo*,—rescribe, rescript; from *subscribo*,—subscribe, subscriber, subscription; from *superscribo*,—superscribe, superscription; from *transcribo*,—transcribe, transcriber, transcript, transcription.

From *scribo* are derived, in French, *écrire*, *écriture*, *écrivains*

French language nearly as many, and in the Italian language a still greater number.

écrivain; from *conscribo*, *conscript*; from *circumscribo*,—*circumscription*, *circonscrire*; from *describo*,—*décrire*, *description*; from *inscribo*,—*inscription*, *inscrire*; from *prescribo*,—*prescriptible*, *prescription*, *prescrire*; from *proscribo*,—*proscription*, *proscrire*; from *rescribo*,—*rescription*, *rescrit*; from *subscribo*,—*souscripteur*, *souscription*, *souscrire*; from *transcribo*,—*transcription*, *transcrire*.

From *scribo*, in Italian, are derived, —*scritta*, *scritto*, *scrittojo*, *scrittore*, *scrittura*, *scritturale*, *scrivano*, *scrivere*; from *ascribo*,—*ascrivere*; from *circumscribo*,—*circoscrivere*, *circoscrivimento*, *circoscrizione*; from *conscribo*,—*coscrivere*; from *describo*,—*descrivere*, *describibile*, *descrittivo*, *descrittore*, *descrizione*; from *inscribo*,—*inscrivibile*, *inscrivere*, *inscrizione*; from *prescribo*,—*prescrivere*, *prescrizione*, *prescritto*; from *proscribo*,—*proscrivere*, *proscrizione*; from *rescribo*,—*rescrivere*, *rescritto*; from *subscribo*,—*sos* or *sottoscrivere*, *soscrizione*, *soscritto*; from *suprascribo*,—*soprascritta*, *soprascrivere*, *soprascrizione*; from *transcribo*,—*trascrivere*, *trascritto*.

From *duco* are derived, in English, *duct*; from *abduco*,—*abduco*, *abducent*, *abduction*, *abductor*; from *adduco*,—*adduce*, *adducent*; from *circumduco*,—*circumduct*, *circumduction*; from *conduco*,—*conduce*, *conducibile*, *conducive*, *conduct*, *conduction*, *conductor*, *conductress*, *conduit*; from *deduco*,—*deduce*, *deducible*, *deducive*, *deduct*, *deduction*, *deductive*; from *educio*,—*educe*, *eduction*; from *induco*,—*induce*, *induction*, *inductive*; from *introduco*,—*introduce*, *introduction*, *inductive*, *introductory*; from *obduco*,—*obduce*, *obduction*; from *produco*,—*produce*, *producent*, *producibile*, *product*, *productile*, *production*, *productive*; from *reduco*,—*reduce*, *reducibile*, *reduction*, *reductive*; from *seduco*,—*seduce*, *seducibile*, *seduction*; from *subduco*,—*subduce*, *subduct*, *subduction*; from *traduco*,—*traduce*, *traducibile*, *traduction*.

From *duco* are derived, in French, *duc*, *ductile*, *ductilité*; from *conduco*,—*conducteur*, *conductrice*, *conduction*, *conduire*, *conduit*, *conduite*; from *deduco*,—*deduction*, *deduire*; from *induco*,—*induction*, *induire*; from *introduco*,—*introduceur*, *introduceur*, *introduceur*, *introduction*, *introduire*; from *produco*,—*production*, *produire*, *produit*; from *reduco*,—*reductible*, *reductif*, *reduction*, *reduire*; from *seduco*,—*seducteur*, *seductrice*, *seduction*, *seduire*; from *traduco*,—*traducteur*, *traduction*, *traduire*, *traduisible*.

From *duco*, in Italian, are derived, *duca*, *duce*, *duttore*; from *adduco*,—*addurre*, *adducitore*, *adducitrice*; from *conduco*,—*condotta*, *condottiere*, *condotto*, *condurre*, *conducibile*, *conducimento*, *conducitore*, *conducitrice*, *conduttore*; from *deduco*,—*dedurre*, *deduzione*;

When a child has learned from a dictionary the meaning of the word *position*, he is no nearer than before to the meaning of the word *composition*, and when he has looked for both, he is not able even to guess at the sense of *supposition*, or *imposition*. But knowing the elementary syllables, and finding the meaning of *pono*, he is only to use his mind and not his fingers, to arrive at the meaning of all the words compounded of them. So it is in a thousand other cases, and he knows them not for one language only but for several.*

I do not insist here upon the discipline, which the learning of this ancient language affords to the mind, though I know none equal to it for the formation of the judgment and the taste,—nor of its suitableness as an introduction to almost all other studies.

I must briefly notice an objection which is made to the study, which, if well founded, would be of vital importance. It is said that the Latin and Greek authors are not a proper study for females, because of their defective morality. This is admitted to be true of some of them, and those certainly ought not to be studied. It is not true of the select authors which are usually put into the hands of children. Heathen theology and heathen morality were wretchedly enough defective, it is true, and those only who know how miserably low they were, can rightly prize the gift of the Gospel.

from *induco*,—*indurre*, *inducimento*, *inducitore*; from *introduco*,—*introdotta*, *introducimento*, *introducitore*, *introdurre*, *introduttivo*, *introduttore*, *introduzione*; from *perduco*,—*perdurre*; from *produco*,—*prodotto*, *producibile*, *produttore*, *produttrice*, *produrre*, *produttibile*, *produttivo*, *produzione*; from *reduco*,—*re- or ri-ducimento*, *riduttore*, *ridurre*, *riduzione*; from *seduco*,—*sedurre*, *seduciente*, *seducimento*, *seduttore*, *seduttrice*, *seduzione*; from *subduco*,—*subdurre*; from *traduco*,—*tradurre*, *traduttore*, *traduttore*, *traduzione*.

* It may perhaps be said that when a child is learning Latin, he does not notice the English words which are derived from it. This will be perhaps true if he be very carelessly instructed; but as he advances in the knowledge of the language, he cannot avoid it, and often becomes acquainted with a vast number of derivative words without knowing whence he learnt them.

But whether it be that the purifying hand of time has destroyed much of what was worthless in the writings of the ancients, or that the corrupters of the ancient race were content with giving example without precept, it is not the Moores and Byrons and Bulwers and Fieldings of antiquity, whose works have come down to us ; it is Plato and Cicero, Virgil and Homer, and the grave lawgivers and historians of former days,—the august masters of the Miltons, Dantes, Tassos, Fenelons, Addisons, Racines, Cowpers and Coleridges of our own.* Is it nothing that these lights of modern times borrowed only noble and pure thoughts from the ancients? They were nourished with the spirit of antiquity.

Hither as to their fountain, other stars,
Repairing, in their golden urns draw light.

We boast, and not without reason, of our English literature as one of the purest of modern times. Yet we may venture, without fear of contradiction, to assert, that there has been published, in verse and prose, in the English language alone, within the present century, more of a demoralizing tendency than can be found in all that has come down from the libraries of Greece and Rome.

Doubtless these languages, as well as others, are often taught absurdly, and many of the objections brought against them are due to the indolence, or ignorance, or stupidity of master, or pupil, or both ; but I presume that most persons who have had varied experience in teaching, will agree with me in the conclusion to which my own has led, that wherever five or six years are to be devoted to study, the time spent upon Latin is more than wholly saved, in the facility, skill and power, the learning it imparts for other acquisitions.

* If the study of the classic authors have the corrupting tendency which is sometimes attributed to it, how has it happened that the writers above-mentioned so entirely escaped this influence ? It would be difficult to find an equal number of moderns whose writings breathe a higher morality, and it would be impossible to find the same number more thoroughly imbued with the spirit—essentially a pure and free spirit, of classical antiquity.

The third great purpose of education I stated to be the discipline of the faculties ; and in this I would be understood to include whatever goes to form the whole character of man, as a thinking, feeling and accountable being, for the present life and for the future. Time would fail me in attempting the slightest sketch of this part of my subject. What relates to the home education of a female—by far the most important part of her education,—how the household virtues may be formed, by what union of wisdom and gentleness the pure mind may be trained to modesty, gentleness, and firmness,—how the taint of evil may be washed out and the weeds of sin removed, must be left to other occasions and abler hands. I shall confine myself to that part which properly belongs to the schoolmaster, and on this I have only time for a few brief remarks.

The most usual studies which have the discipline of the mind as peculiarly their object, are mental arithmetic, geometry, and composition.

The value of mental arithmetic, is now, in consequence of the writings of an individual, generally and pretty well understood. The introduction of text-books upon the subject, has changed the study of arithmetic from a perplexing and mechanical manipulation to an important intellectual exercise. To derive all the advantage from it of which it is susceptible, the method of mental arithmetic should be more extensively applied and longer continued. Instead of being only an introduction to written arithmetic, it should go along with and beyond it. It comprehends the more valuable part of algebra. If rightly used, nothing can have a more direct tendency to form habits of concise, exact, and rapid reasoning.

This study may be succeeded by geometry, an application of a similar process to a longer train of arguments. When the mind is sufficiently advanced to be capable of it, I know of no reason why females should be deprived of the advantages of this best of means of discipline. They, at least as much as we, have occasion for patience, correctness of judg-

ment, and the power of long keeping a single object in view, qualities which the study of geometry tends to mature. Whoever will consider the unity of purpose and the firmness required in the management of a child, will be ready to admit that the possession of them by mothers is important to the interests of the race.

But the most extensive means of discipline are afforded by the practice of composition. The importance of this branch of instruction is so generally acknowledged, that it is unnecessary to dwell upon it. In the usual course, it is almost the only mode of exercising the talent of invention, and the best of perfecting the judgment and taste, and giving a command of the materials already laid up in the memory.

The higher species of composition, such as the writing of essays and discussions, should be preceded and accompanied by frequent and extensive reading of the best English authors. Where it can be done,—and books are now so cheap that there are few cases where it cannot,—the authors themselves should be introduced to the learner, instead of the volumes of extracts which are usually and perhaps necessarily employed in schools. It is only from a mind full from reading that good thoughts can commonly be drawn.

The enumeration I have made might be greatly extended, as almost every thing which is acquired, may be so acquired as to furnish a valuable exercise to some of the powers of the mind. I have very slightly noticed some of those only which have discipline as their immediate object.

The extent to which I would have the education of a female in favorable circumstances carried, is sufficiently declared by the sketch of studies which I have exhibited. There are thousands in our country who are capable, by their talents and leisure, of such an education as I have described. The great mass of our population are in easy circumstances, and, almost universally, the business by which families are supported, is conducted exclusively by the men. The daughters, not only of men of wealth, but of professional men, of farmers, mechanics, and

often of laborers, have the greater part of their time until they are married, at their own disposal. They may waste it in the frivolities of gossip and dress and fashion, or they may employ it for the noble purposes for which it is given them. Intellect is equally distributed. How often, in the brief period of our country's history, have the finest geniuses emerged from what, in the older countries, are called the lower classes of society. What then is to prevent the females of all portions of our community from being highly educated? And why should they not be so? The future lights of the nation, those who are to guide us in literature, in religion, in arts and the glories of peace, are as likely to spring up among the villages and in the remote districts of the country, as in the cities. Give them mothers worthy to educate them, and then will they be more likely to imbibe the generous spirit of self-devotion, the contempt of difficulties, and the love of liberty, of country and of truth, which should be the heritage of the citizens of a free republic.

There is scarcely a family in New-England which has not the privilege of sending its children to a public school for a large part of the year. On the instructors of these schools, especially on the female instructors, who are employed for a greater portion of the time, does it depend to elevate the standard of education to what its importance demands. As long as an instructor is considered well qualified for his office, who knows no language but his own, and that, of consequence, imperfectly, who is not acquainted with any branch of natural science with which he should store his own mind and that of his pupil, nor of mathematical or moral science, by which to discipline the mind and form the character,—so long must the schools remain in their present condition, and the unimagined advantages of a better system be lost. But there is not a teacher who has not leisure, each year, to make important additions to his own acquirements, and valuable improvements in his modes of teaching.

Hitherto, it has been considered of more importance that men should be well educated, than that women should be. It is

not so. With the exception of what belongs to the professions and to the business of government, it is more important to the community that women should be well educated. No human being is so completely isolated among his fellow creatures, but that his possessing a highly cultivated mind shall be a common good. In man the good is communicated indirectly. A highly cultivated female, on the contrary, exerts an immediate influence upon her children, and through them upon the human race. Educate all the men of a generation, and leave the woman uneducated, and every child under their influence begins his public education with all the disadvantages of his father. Educate all the females, and you will give a permanent impulse to the onward movement of the race, which it can never lose. Each individual begins his progress from a higher level, and, with equal exertion, will bequeath a richer inheritance of knowledge and wisdom to his successors.

It has been urged, and with great justice, to account for the little that has until recently been done by our countrymen, in literature and the sciences, that our men want leisure, that, in consequence of the equal division of property, almost every man has some profession or business to which he must devote the greater part of his time. It is not so with our women. They have as much leisure as the females of the most favored community in the old world. We are not willing to think that they have less capacity for improvement. They have already afforded some illustrious examples which would lead us to infer no inferiority to the most distinguished of their sisters beyond the ocean. We cannot think that literature or the arts and sciences would suffer, in consequence of a higher degree of favor. At least the influence could not be inauspicious, which would be shed upon them by females of sentiment heightened by religious principle, and taste refined by a generous education, who should breathe into infant genius in his cradle, the love of nature and beauty, with aspirations after excellence and perfection.

Education cannot be universal which is not shared in at

least an equal degree by females. The magnanimous virtues, disinterested and devoted love of country, cannot be communicated but by mothers of the pure minds and dignified character which virtue and self-respect alone can give. The spirit of Grecian liberty failed not until her mothers were corrupted by the softness and vices of the East. And the Romans lost not all the freedom of the old republic, until Roman matrons had abandoned the care of their children to nurses and schoolmasters who were Grecian slaves.

No nation ever acquired permanent liberty in which marriage was not sacred, and the female character respected and deserving of respect. That our liberty may be permanent, our females must receive a high, pure, liberal, religious education, such as shall qualify them to educate men; and it is only by giving them such an education, that we can diffuse through our community the universal knowledge of right and justice, on which our institutions depend, and without which they will disappoint the hopes of the world.

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LECTURE III.

ON

MORAL EDUCATION.

BY

JACOB ABBOTT.

THE GAZETTE

OF THE GOVERNMENT OF INDIA

FOR THE YEAR 1904

MORAL EDUCATION.

It will probably be generally acknowledged, that in our schools the department of moral education is in the rear of all the others. It is not that the principles by which the conscience and the heart are to be reached, are less sure or less attainable than those which we obey in cultivating the intellect ; but that they are less generally understood, and have a much slighter influence in regulating the practice. Every teacher feels that it is his *direct business* to secure the progress of his pupils in the arts of reading, writing and calculation ; but we leave the affections and dispositions of the heart to grow as they will, and it is to be feared that the atmosphere of the school-room withers and blights, as often as it protects and sustains.

Suppose that some lover of statistics were to go through the families among whom we respectively teach, with the view of collecting from them authentic information in regard to the *intellectual* and also to the *moral* progress of their children.

Under the first head we may imagine the enquirer to ascertain precisely what progress in the various branches of *school instruction* has been made. He may enquire into the state of the intellectual powers of the pupils when they entered school,—and learn whether any, and if any, what progress in reading, spelling, writing and arithmetic, has been made from month to month, and year to year. The result of such enquiries would unquestionably be the evidence in almost every

case of a steady, though perhaps slow advance. The boy who enters, ignorant of his letters, does, in process of time, somehow or other, learn to read. There is no school so entirely unsuccessful but that its pupils do, as months roll on, acquire the power of writing. They do by some methods, good or bad, learn to add a column of figures, and to calculate, slowly and awkwardly perhaps, the sums they receive and pay. A school is in these respects never a failure. The children may advance slowly, and in a rather zigzag direction. Still they do advance.

But suppose our enquirer were now to open his budget of questions relating to the *moral* progress of the pupils. He would in most cases, we think, obtain a very different result. Let us imagine such questions as the following to be addressed to the parent.

"Has any apparent change taken place in the *character* and *conduct* of your child since he began to go to school?"

"Has he become more *amiable* and *gentle*, or more *rude* and *selfish* and *ungovernable*?"

"Has his regard for truth been increased or diminished by the influence of the school?"

"Is he more or less docile at home?"

"Has he acquired bad language, or bad habits of any kind, or have previous faults of this character been gradually corrected?"

"Do you find that, on the whole, his connexion with the school is a means of moral improvement,—or is it chiefly a source of temptation from which you find it difficult to protect him?"

It would certainly be a very interesting experiment, if an individual would visit the families of some intelligent district, with a list of such questions, both on intellectual and moral improvement, more full and methodical indeed than these, but having the same general object, of ascertaining *through parents themselves*, the actual operation of the school upon the minds and hearts of their children. If such an en-

quiry should be made, we presume that in ordinary instances, the result would prove far more favorable in the former case than in the latter. The *minds* of that immense mass of human beings which, while we speak, are assembled in the thousands, and tens of thousands of school-rooms of our land, are advancing—steadily advancing. Some with greater and some with less degrees of rapidity, but on the whole, this vast amount of mind is expanding under the influence which surrounds it. In particular places it may be stationary for a time—in almost all its progress may be far too slow—useless difficulties may obstruct and unnecessary friction may irritate and impede. But the work is, notwithstanding this, going on, and in ten or twenty years, these beings will have been raised from the imbecility and ignorance of childhood, and will constitute the strength and the efficiency of this great community.

In regard however to the other great department,—the *cultivation of moral principle*, there may be great doubt what is on the whole the influence of the school-room. We fear there is no such universal, though slow progress in *virtue*. Boys perhaps acquire at school as often a love of contention as a love of peace. The heart is in innumerable instances hardened,—the selfish propensities strengthened and advanced by the various influences which are brought to bear upon childhood and youth. The teacher may coerce the external conduct—he may suppress the exhibition of vice, but if there is any way by which, throughout the schools of our country, there may be a steady and sure advance in virtuous principle, as well as in knowledge, it is a way which we have yet to explore.

There may perhaps be some question how far the cultivation of virtuous principle is a proper object of direct attention in schools. Some one may contend that in the division of labor upon whose principles society acts, the school is for intellectual, and the *pulpit* for moral instruction. This question I shall not discuss. The assignment of the subject is an expression of opinion on the part of the Government of this In-

stitute, that the means of moral influence which are placed so extensively in the hands of our profession, ought to be employed for a useful purpose, and I shall accordingly turn my attention immediately to what may be of directly practical tendency.

1. The first step which a teacher must take, I do not mean *in* his course of moral education, but before he is prepared to enter that course, is to obtain the entire, unqualified submission of his school to his *authority*. We often err when designing to exert a moral influence, by substituting throughout our whole system persuasion for power; but we soon find that the gentle winning influence of moral suasion, however beautiful in theory, will often fall powerless upon the heart, and we then must have authority, to fall back upon, or all is lost. I have known parents, whose principle it was, not to require any thing of the child, excepting what the child could understand and feel to be right. The mother in such a case, forgets that a heart in temptation is proof against all argument; and I have literally known a case where the simple question of going to bed, required a parental pleading of an hour, in which the mother's stores of rhetoric and logic were exhausted in vain. Teachers sometimes too, resolve that they will resort to no arbitrary measures. They will explain the nature of duty, and the happiness of its performance, and lead their pupils to love what is right without bringing in the authority of arbitrary command. But the plan fails. However men may differ in their theories of human nature, it is pretty generally agreed by those who have tried the experiment, that neither school nor family can be preserved in order by eloquence and argument alone. There must be authority. The pupils may not often feel it. But they *must know that it is always at hand*, and the pupils must be taught to submit to it as to simple *authority*. The subjection of the governed to the will of one man, in such a way that the expression of his will must be the final decision of every question, is the only government that will answer in school or in family. A

government not of persuasion, not of reasons assigned, not of the will of the majority, but of the will of the one who presides.

The experiment has been tried of a republican form of government in schools, and has been in some instances highly successful. But let it be observed it is the republican *form* of government alone. I do not believe that the experiment of a government republican in reality, was ever tried in any school. I mean by a really republican government the relinquishment of the concerns of the school into the pupils' hands—so that the teachers may stand entirely aloof—feeling no responsibility except in the duties of instruction. A republican *form* may succeed where the teacher has the genius to govern the school himself *through* all the machinery of the forms. In such cases the forms may do much good; but the real, honest, bona fide surrender of a literary institution into the hands of its pupils is an experiment which I believe no projector has yet been bold enough to try.

Although the principal of the school must thus really have full control, I do not mean that the *tone* and *manner* of authority are to be generally employed in the management of the school. They doubtless ought very seldom to be employed. What I contend for is that the authority itself should exist—and be appealed to frequently enough to show its existence and its power. All the ordinary arrangements of a well regulated school will go on without it. A request will be complied with, as implicitly as a command obeyed. But in order to feel safe and strong, the teacher must always possess power to which he knows he can at any time appeal. And it is not useless while it lies dormant. The government of the United States employs its hundreds of workmen at Springfield and at Harper's Ferry in the manufacture of muskets. The inspector examines every one as it is finished, with great care. He adjusts the flint—and tries it again and again until its emitted shower of sparks is of proper brilliancy,—and when satisfied that all is right, he packs it away with its thousand companions, to sleep probably in their boxes in quiet obscurity

or eve A hundred thousand of these deadly instruments form a volcano of slumbering power, which never has been awakened, and which we hope never will. The government never makes use of them. One of its agents, a custom-house officer, waits upon you for the payment of a bond. He brings no musket. He keeps no troops. He comes with the gentleness and civility of a social visit. But you know, that if compliance with the just demands of your government is refused, and the resistance is sustained, force after force would be brought to bear upon you, until the whole hundred thousand muskets should speak with their united and tremendous energy. The government of these United States is thus a mighty engine, working with immense momentum, but the parts which bear upon the citizens conceal their power by the elegance of the workmanship, and by the slowness and apparent gentleness of their motion. If you yield to it, it glides smoothly and pleasantly by. If you resist it, it crushes you to atoms.

Such ought to be the character of all government. The teacher of a school especially must act upon these principles. He will be mild and gentle in his manners ; in his intercourse with his pupils he will use the language and assume the air, not of stern authority, but of request and persuasion. But there must be authority at the bottom to sustain him, or he can do nothing successfully, especially in attempting to reach the hearts of his pupils. As to the means of obtaining the proper ascendancy I am not now to speak. I speak only of its absolute necessity in order to enable us to do any thing efficiently in cultivating the heart.

The reason why it is necessary is this. First, the man who has not the full, unqualified, complete control of his scholars, must spend his time and wear out his spirits in preserving any tolerable order in his dominions ; and secondly, he who has not authority will be so constantly vexed and fretted by the occurrences which will take place around him, that all his moral power will be neutralized by the withering influence of his clouded brow. To do good to our pupils, our own

spirits must be composed and at rest:—and especially if we wish to influence favorably the hearts of others, our own must rise above the troubled waters of irritation and anxious care.

There is one point more to be considered before I come to the direct means of exerting moral influence.

It is not moral *instruction* chiefly at which we are to aim, but moral *education*. That is to say, our object is not to teach our pupils what their duty *is*, but to induce them to *do it*. They know what their duty is already. I do not mean that they need no instruction, but that instruction is not the main point. The difficulty with the whole human family is not ignorance in regard to right and wrong, but a want of moral principle, to resist the temptation to do acknowledged wrong. The virtuous,—in whose cases the temptation has been weakened by protracted resistance, and moral principle strengthened by long continued cultivation,—are often inclined to imagine that to know duty distinctly will ensure its performance. They do not understand how completely conscience may be seared, and how imperious are the demands of propensities and passions which have long been indulged.

A few weeks since a man was carried to a hospital in this vicinity—convulsed and maddened with *delirium tremens*,—the frequent penalty of long continued intemperance. He spent, as is usual in such cases, several days in agony, mental and bodily, gnashing his teeth and lacerating his tongue in the violence of the paroxysms. Time however, and the remedies applied prevailed, and in a few days, he lay weak and exhausted upon his bed,—but convalescent. At this time another patient was brought into the room, raving in the same dreadful malady, and as is not uncommon, some ardent spirit was once or twice administered by his physician. The convalescent man said, and no doubt sincerely, that he wished he had *delirium tremens* again, that he might take spirit as a medicine.

Suppose this man to go forth into the world, can he be re-

strained from yielding to temptation, by being instructed in the nature of intemperance and the greatness of the sufferings which it brings upon its victims? This case is indeed a strong one, but it illustrates the universal nature of guilt. It is all infatuation. We do what, at the time we do it, we know to be wrong, and consequently we want not *light*, not *information*, but the growth and the strength of moral principle to sustain us in a path already plain. Let me not be understood to say that instruction is not important,—it is highly important as an auxiliary, I only say it is not the main thing. Children must be taught their duty; the consequences of guilt of every kind must be plainly pointed out; but, after all, if this instruction is given in a cold and speculative manner, boys will go on, in the very face of it. Our aim must be to reach the heart—not to enlighten the intellect, but to build up and sustain conscience and moral principle.

But how shall we reach the heart? It is easy to *instruct* but how shall we *influence to action*?

The true theory of moral discipline seems to be this. When the human heart is assailed by temptation, if conscience and moral principle triumph, they are strengthened by the victory. If they yield, they are weakened, and prepared to be vanquished more easily on a subsequent attack. If then we would train up moral principle, we bring the individual into circumstances of temptation, strong enough to *try* that principle, but not to overwhelm it. The scenes of trial should increase in difficulty as the plant we endeavor to cherish increases in vigor. For each conquest renders the succeeding one more easy. The heart advances from victory to victory, or, as a writer of high authority, very forcibly expresses it, “from strength to strength.” If however temptation should once be too strong, and moral principle should yield, a great injury is done. Conscience is seared, the moral sense is blunted, and the pilgrim is thrown back in his course, to take his weary steps anew. Virtuous principle is a growing plant, whose roots and stem the winds of heaven strengthen. When pressed by the breeze,

(unless it is pressed too strongly), every fibre clings more closely—and at every weak point, a shoot puts forth to give greater firmness to the support. All this is well, but let the gale rise beyond this degree, and the thriving stem is strained,—branches are broken,—and perhaps the plant is torn with all its roots from the ground.

It is surprising how much the question of growing better or worse, depends upon the *strength of the temptation*.

One teacher leaves a class of little boys saying, "I am going away a few minutes. Do you think if I allow A. to take the slate and read these figures the rest can copy them upon their slates?" "Yes Sir." "But do you think you shall preserve good order?" "Yes, sir, we will try." "You may try then, but it will be difficult, for you are not accustomed to take care of yourselves, and it is by no means an easy art. But I think you may succeed, by following these directions. A. is to read very distinctly, and slowly, and the others are to pay careful attention,—write every figure as soon as it is named, and not ask any questions unless it is absolutely necessary."

The teacher then leaves them, and with the precautions he has taken, the temptation to disorder is not too great to be overcome, and that class will be more easily managed after such an experiment than before. And by a repetition of similar experiments, it can acquire habits of perfect self-control.

Another teacher in a school, not previously trained to self-government, leaves twenty of his rude boys in the school-room during the intermission, charging them to be still and quiet, and not to be guilty of any impropriety. In half an hour after he is gone, the stranger who walks along the street is arrested by the noise and uproar which fill the room. The temptation afforded by the time and place was overwhelming. A few might have formed a feeble resolution to comply with their teacher's wishes, when they were expressed, but such resolutions could be no adequate defence. They are borne away as by a whirlwind, and I need not say that being thus con-

quered, they were just prepared to be conquered easily again. The repetition too of such an experiment will give to momentary feeling an habitual and impetuous control over conscience and moral principle. These two experiments are alike in every respect but one. In both cases there was to be temptation ; in both liberty,—in both there must be a struggle. But in the one, the circumstances were so adjusted that duty was to conquer ; in the other it might easily have been perceived that she must fall.

Our rule of moral education then is this. *Keep virtuous principle always in the field of battle, but be sure so to fortify and encourage and protect her that she shall always conquer.* She must be exposed. Without exposure there can be no healthy and vigorous growth. But do not force her to too rough or sudden an exposure, or you rend the roots of the stem which you wish to strengthen and mature.

Suppose then that a teacher enters upon his duties in an unruly and irregular school, what are the particular steps which he shall take in order to exert in it a powerful moral influence ? The first thing to be done, as has already been urged, is to obtain complete and unqualified command of the school. This is to be done with as much gentle dexterity as possible, but it must in some way be *done*. The pupils must understand that the will of the teacher is there the supreme law. This will must indeed be founded on just and equitable principles, but the teacher is not accountable to his pupils for those principles. He may when he thinks it best, and doubtless he often should, explain his reasons, but he ought to guard against their supposing that their obedience is to be founded on their conviction of the propriety of the teacher's requirements. The school must learn to submit to *authority*. No community of children that I have seen are capable of being governed by argument and persuasion. These methods may *generally* succeed, but we cannot *rely upon them*. They will do upon a smooth sea in pleasant weather, but we must have very different ballast in a storm.

Although then this authority must exist, it must not, in its repulsive forms, be often appealed to. If a school is governed openly and habitually by harshness or by force, there will be such an atmosphere diffused over it, that the teacher will have little hope of success in reaching the hearts of his pupils. If however by his adroitness rather than by his physical force, he has obtained an unquestioned ascendancy—and all is quiet, and order, and submission, the way is opened for another preparatory step. I mean securing the confidence and affection of the pupils. This is indispensable. The man whom we dislike will not easily allure us to his principles.

A distinguished teacher once made this remark: "To make your pupils like you, all that is necessary is for you to like them." This is absolutely necessary. Empty professions of interest and attachment will not succeed; children will not be deceived by them. If we do not feel a strong spontaneous interest in the characteristics and the progress of childhood, such an interest must be awakened, or all will be in vain. The teacher who endeavors to mould the heart without entering into its feelings, and sympathizing with its joys and sorrows, will have a hopeless task—all will be cold and lifeless.

Suppose then these preliminary steps to have been taken. The school is entirely under the command of the teacher, and, by the interest which he has taken in the pupils, he has secured their confidence and attachment as well as their obedience,—what shall be his first step in training up the hearts of his pupils to duty? It is obvious, from the principle which I have laid down above, that the first lesson must be an *easy* one. The school as a school has been very slightly accustomed to make any moral effort.—A little temptation will overwhelm them. The first exposure then, by which moral principle is to be strengthened, must be a *gentle* exposure. Perhaps the most suitable effort to be first made is to form among the pupils habits of self-control in regard to the general order and stillness of the room. To illustrate the manner

in which the teacher's influence may be exerted we will imagine the following conversation:—

Teacher. "Suppose I were to tell you, boys, that you were to have either a holiday to-morrow or two holidays next week, and that you might decide which you would have; could you decide easily?"

Boys, all together, "Yes Sir."

"Which would you have?"

Boys in confusion, "Tomorrow." "Next week." "To-morrow."

"Some say one and some the other. Now suppose I were to request you in the next recess, to talk over this subject and decide it;—could you do it?"

"Yes Sir."

"I think you could not. You would all be talking about it in confusion;—You could not tell how many were in favor of one and how many of the other. The recess would pass and nobody could tell me the decision. There would not be any decision."

James, one of the oldest boys, replies, "We might take a paper and go around and ask each one, and mark it down."

"Who might take the paper?"

"Any body."

"But who should decide, which person should do it. If it was left for any one to do it, several would probably commence, and thus there would be confusion."

"Besides," continues the teacher, "suppose the boys were almost equally divided, I fear that some of those who were in the minority would be dissatisfied and find fault; and talk harshly and angrily against the others. How many of you think it would be so?"

Many hands are raised.

The teacher, in the same free and colloquial manner, shows that *men* are able to decide all questions in regular quiet assemblies, where all are still, and adhere closely to the rules necessary for preserving order.

"Did you ever hear it said," continues the teacher, "that some nations are not fit for a republican government?"

Boys, "Yes Sir."

"One great reason is, they cannot have quiet and orderly assemblies to discuss and decide questions. When those people come together they all talk at once, and make confusion. They are all very eager to have their own wishes prevail, and are unwilling to acquiesce in the decision of the majority. They are like most boys in a school-room. If the teacher leaves them a moment, there is an end of all quiet and regularity. Is it not so generally in schools?"

Boys. "Yes Sir."

"Would it be so here if I were to leave the room five minutes?"

A pause.

"I presume it would. Though still I think it probable that if I were to give you an opportunity to try, many would endeavor to keep themselves in order without any one to watch them. How many of you would like to try?"

Probably many hands would be raised, and if from the peculiar circumstances of the school, and from the character of the principal boys, it should appear judicious to do it, at some time when the teacher is called away by business, the room might be left for five minutes, for the purpose of giving an opportunity to practise this self-control.

Once when I made this experiment, a conversation like the following ensued on my return.

"I am going to ask some questions which I should like to have those answer who please. I have no idea that the school has been perfectly still. It is not possible that you should acquire perfect self-control by one single effort. I should like however to know how well you have succeeded."

"In the first place, probably some of you did wrong deliberately; or at least you did something which now you know was wrong, and which you would not do again. Now if there

are any such, and if they are frank and honest enough to acknowledge it, I wish they would rise.

Several slowly and hesitatingly arose. I observed that others looked perplexed, and I added, as they were rising one after another, "I wish none to rise who are afraid—none but those who are cordially willing to acknowledge that they have done wrong."

Several others stood while I was speaking ; after a moment's pause I continued, "Those that are now standing have done wrong and are willing to acknowledge it. Probably there are others who wish to conceal it. They of course remain sitting."

"How many of those who are now standing are willing to tell what they have done ?"

Nearly all the hands were raised.

"I have not time to enquire now. You may therefore sit ; and all those who can honestly say that they did not do any thing improper while I was out may rise."

About half the school immediately rose.

"You think that you have done nothing wrong, but perhaps you have forgotten something. How many are willing that if the others noticed any thing wrong in your conduct, that they should state it ?"

All the hands were raised and the enquiry was accordingly made. Several particulars were stated—and slight but not intentional irregularities were discovered. By such a mode of enquiry the true state of the school during my absence was easily and pleasantly ascertained, and the subject was dismissed by remarks indicative that I was satisfied and pleased with the result, and considered them as having made one successful experiment in the art of self-control. In a few days the experiment was repeated and the process continued, until in a few months I could at any time leave the school with perfect confidence that all would be regular and quiet until my return. I assumed throughout the whole the attitude of assisting them to acquire an art which they were desirous to acquire, and

though I always ascertained and noticed every thing that was wrong, I took much more notice of the cases of success than of failure. In securing obedience slight transgressions must receive special but not severe attention; but in endeavoring to exert a moral influence upon the motives of the heart it is much easier and pleasanter to allure to what is right than to drive from what is wrong.

When such an experiment as this has been tried, if it has been successful, a great point has been gained. The pupil has tasted a new pleasure—the happiness of voluntary effort in doing duty. From acting as he had heretofore been accustomed to act, in entire dependence on the watchfulness and care of his teacher,—he has advanced to the dignity of self-control. He begins to feel that it is degrading to him to be watched like an infant, and to be regarded incapable of moral effort. If the succeeding steps in the series are skilfully taken—and the process is not urged too fast—the pupil will soon find a new pleasure in the voluntary discharge of duty,—in meeting and resisting temptation,—in receiving proofs of confidence and showing himself worthy of the trust. When these feelings are once made prevalent in a school, they may easily be turned to the attainment of any moral object. The taste for moral improvement and the feeling of moral power is formed, and all that is now necessary is for the teacher to go steadily forward, presenting one duty after another, and bringing his pupils into circumstances where they have opportunity to perform the duties, and to resist the opposing temptations. He must watch them in all their course. No general directions can supply the place of ingenuity on his part—or of untiring fidelity.

I have selected interest in the good order of the school as one subject, and as perhaps the most favorable one for the commencement of the teacher's efforts to inspire his pupils with a love of moral effort and self-control. The interest of the pupils may, on this subject, by skilful cultivation, be carried to a great extent,—so that nearly all the arrangements of the school may be delegated to them, and entrusted to their care.

If this is done however it must be the distinct understanding that the power is from the teacher ; that he and not the pupil is the fountain of power, and he can at any time resume all that he has conferred.

In my own practice this system is pursued. Almost every question which occurs in the administration of the school is referred to the scholars for decision. They however very distinctly understand that whatever power they thus exercise is power delegated from me to them ; that I can at any time resume it, or suspend it, and alter, annul or reverse their decisions. The manner in which the business is arranged is this. During the day any pupil is at liberty to write upon a slip of paper, any question relating to the general business of the school any proposal for new regulations in any respect, or a modification of those already existing,—or to express her dissatisfaction with of any of the arrangements of the school, or of any practice prevailing in it. These *propositions*, as they are technically called, are at the close of the school brought to me. They are read aloud. The questions are answered,—motions are put,—plans suggested are approved or condemned, either by myself or by referring them to a general vote, according to the nature of the case. This simple practice has more effect in making me acquainted with the state of opinion and feeling in school, in interesting the scholars in the successful operation of my plans, and in preserving order and regularity, than all which I do beside.

That the audience may the more fully understand the practical application of the system, I will read the Propositions which came before the school on the day when this paragraph was penned. That it may be fully understood, that this is a specimen of the *ordinary operation* of the system, I ought to state that these remarks were written in the morning, with the resolution of inserting the Propositions of that day before I knew what they were to be.

Proposed, That a committee be chosen out of the first class of composition, to correct the compositions of the second class.

Mr. Abbott, Will you please to explain to us how the attraction of the moon can make tides.

Proposed, That a new pasteboard be placed in each stationary desk bearing the label, Miscellaneous Questions, or something of the kind; for some of the scholars have frequently wished to ask questions on philosophical and other subjects, but as they seemed hardly appropriate to the proposition paper, they have omitted to make enquiries of this nature.

Mr. Abbott, How can I do any thing to prevent my little sister telling lies?

Proposed, That a new class be formed in geometry, as some would like to begin.

Some individuals will undoubtedly think that in reading these papers I go into unnecessary details. Perhaps it is so. But when I sit listening to the lectures of the other gentlemen, I always welcome with peculiar interest every approach to circumstantial detail. I hunger and thirst after practical and particular information. I want to look through the lecturer into his school to see and to hear what transpires there—what his plans are in their detail, how they operate and what is their success; and I am of opinion that such particularity, if we will but adopt it, will be far more interesting and profitable than any general speculations however important and just.

The number of papers is usually much greater each day. It varies from five to twenty. Twenty minutes is regularly appropriated to reading them, and disposing of the business brought up.

This general subject—interesting the pupils in the regular and orderly operation of the school—I have thus dwelt upon, because I have considered it as the easiest field to cultivate, the one by which the pupil may most readily be led to *commence the habit* and to taste the pleasure of self-control. If the scholars can become really interested in the success and prosperity of the school, so as to feel that a **part** of the responsibility rests upon them, and to be willing to make effort, and submit to self-denial spontaneously—for the promotion

of the general good—they are prepared for higher moral efforts, in more difficult spheres. The teacher has obtained possession of the reins by which the heart, the conscience, the moral principle is to be guided.

The progress of this discussion leads us very evidently now to enquire into the particular means of carrying forward the pupil to the possession of the various virtues which ought in early life to be cherished. Love of truth, justice, kindness, decision and firmness, courage, both physical and moral, filial affection, industry, are all to receive their *special* attention, and there are special plans appropriate to each. These particular topics, cannot however, in this first lecture on moral education before this body, be discussed. It is to be hoped that they will each hereafter receive a separate and thorough consideration, by being assigned to other hands. I will however before dismissing the subject describe a method which has been pursued with great advantage in my own and in some other schools. My pupils call it, from the day on which it occurs, the Saturday exercise. It was briefly described some months since in the Annals of Education.

Some subject of a moral nature is assigned, and at the appointed hour small strips of paper of uniform size are distributed among the scholars, upon which those who choose write a sentence or two relating to the subject in hand. One makes a remark,—another relates an anecdote,—a third asks a question,—a fourth states a fact,—and thus for ten minutes almost every pen is busy. These brief productions are then all collected, brought to me and read aloud, with such remarks upon each as may seem proper.

This method makes the teacher more fully acquainted with the condition of his school, and the real faults and temptations of his scholars than almost any other mode. Perhaps disobedience to parents is the subject. If so, disobedient acts of every possible variety are presented. Practices not before known to be prevalent, are mentioned by many independent writers. Deception at school may be the topic, and if the scholars have

before voted to be frank, and if the teacher, by his mildness of character and interest in his scholars, has secured their affection, almost every artful contrivance or subterfuge will be brought to view. Once I took bad management by teachers for the topic, inviting the pupils to scan my administration with the same severe scrutiny as that to which their conduct is subjected. The following list of topics which have come up in discussion in this way will show the extent to which the plan may be carried. Bad conduct at home. Generosity. Decision. Diffidence and forwardness. Management of younger brothers or sisters when intrusted to our care. Biting the the nails, and plans to correct the habit. Order. Selfishness. Flattery. Games and plays. Quarrelling. It will be at once perceived that the catalogue might be carried to any extent among the list of vices and virtues—of traits of character and personal habits.

But I must bring these remarks abruptly to a close. No one would expect in a single lecture a full detail of the system of measures to be pursued to form the moral habits of the pupils of a school. If my remarks shall be the means of inducing those teachers, who have not hitherto made this a subject of direct attention, immediately to commence some plans for the accomplishment of this object, it is all which I can expect or desire. The work can only be advanced in various schools by the individual genius and skill of the teachers.

There must be in the generation which is to come upon the stage, a greater portion of social virtue than will come spontaneously, or the dangers which even now threaten our country will thicken into deeper and deeper gloom. To be mild and gentle in spirit, kind and conciliatory in temper and conduct, and submissive to proper authority, are not the natural characteristics of Americans. The stern unbending spirit of freedom which prevails in this land is with difficulty retained in union with the gentler and more peaceful virtues of social life. We must then earnestly exert ourselves to sustain the latter, or else this extended government over our immensely varied country

will soon become a very unstable equilibrium of the fierce elements of whirlwind and storm.

I ought not to close without saying that the superstructure of social virtue ought in my opinion to stand on the foundation of religious principle, by which I mean strong personal affection for the great Creator. This however is not the only foundation. The minds of our pupils may be influenced by love of excellence—by elevated and enlarged ideas of the superior happiness of virtue in this life,—and conscience may be so awakened, and its voice grow so strong, as to exert a most powerful control. These principles too can be brought much more easily to have influence in a school, than real, sincere, unaffected piety,—by which I mean *communion with the Supreme Being and love for him*. Moral education and religious education are therefore distinct, and it was the former subject which was assigned to me. I could not however close my remarks without expressing the sentiment which is unquestionably common to us all, that the members of the great human family will be most just and benevolent to each other, when they are bound most closely to their common father above.

LECTURE III.

ON THE

USEFULNESS OF LYCEUMS;

CONSIDERED IN CONNEXION WITH THE INFLUENCE OF THE COUNTRY

AND AGE IN WHICH WE LIVE,

ON THE CONDITION OF MAN AS AN INDIVIDUAL,

A MEMBER OF SOCIETY, A POLITICAL AGENT, AND AN INTEL-

LECTUAL AND MORAL BEING.

BY

S. C. PHILLIPS.

This Lecture was originally delivered as introductory to the second course of lectures before the Salem Lyceum, on the occasion of opening their new Hall. It was afterwards delivered before the Lyceums in Charlestown, Newburyport and Danvers. It may be proper to add that it has been altered and enlarged since it was first prepared.

USEFULNESS OF LYCEUMS.

GENTLEMEN,

I HAVE been honored by an invitation from your Directors to repeat a lecture which was prepared for another occasion, and a different audience. The occasion was one with which most of you have been elsewhere familiar ; and the audience was a portion of that intelligent and virtuous community, who honor you as their guides, while you rely upon them as your patrons. The subject of the lecture is not foreign to the design of the Institute ; and I state the circumstance to which I have alluded for the purpose of explaining my mode of treating it, if that shall seem more appropriate to a popular discussion, than to the form of address to which you have here been accustomed.

My design is to suggest for your consideration some of the opportunities and means of usefulness, which are placed within the reach of an association constituted and conducted like the Lyceum. Addressing common sense, and appealing to the observation and experience of every one who hears me, I hope to show that here has been opened a field of mutual instruction, where labor cannot lose its reward, and where judicious, persevering, and combined exertions will contribute to the great ends of personal, social, political, intellectual and moral improvement, to an extent commensurate with all proper wishes and reasonable expectations.

The Lyceum seeks to adapt itself to the circumstances of

the community in which it is established. It is an institution designed for this country and for the present age. It is our good fortune to live in a country and an age, in which the condition of man *as an individual, as a member of society, as a political agent, and as an intellectual and moral being* is exhibited in a striking aspect—involving new relations, conferring new trusts, and consequently implying singular responsibilities and important duties. In reference to the object which has been stated, I propose to illustrate this view of the situation of each and all of us.

I. The condition of an individual in this country is peculiar, inasmuch as from the moment of his birth, there is no positive authority, not even the force of external circumstances, to compel him to confine himself to any particular pursuit, to cultivate any particular habits, or to assent to any particular opinions. In other words, the liberty of thinking and acting as an individual is as much his birth-right as his political liberty as a citizen. He opens his eyes to the light of Heaven, and while his consciousness assures him that he is a free-agent, he looks abroad upon the scene of good and evil which the world presents to his earliest gaze, and thanks God for the power that he feels within him to choose the one and refuse the other. He will soon perceive, that, as certainly as he possesses a mind and a heart, the regulation of his thoughts and feelings must depend upon himself; and that while he may derive benefit from the advice and example of others, it is not their office to mould his character and guide his course through life. He will learn, too, as soon as he acquires any practical wisdom, that the circumstances of his infancy bear no fixed relation to the destiny of his manhood; that he is in a community of equals, where the means of education are afforded to all, where the paths of industry and honor are alike open to all, where none can plead any other apology for ignominy than crime, or any better excuse for crime than folly. He will soon prove by his experience that whatever befalls him of success or misfortune, of happiness or misery, of honor or

disgrace, is, in a most important sense, the consequence of his own conduct. Born a pauper, he may thus die the possessor of millions—a farmer's boy, he may reach the highest station in the republic—with no external title to consideration, the treasures of his mind may be the richest legacy of the present age to posterity. On the other hand, with a fortune for his patrimony, he may sink to the level of the poorest day-laborer—graceful and accomplished, the pride of a proud family, the favorite of beauty, and the idol of fashion, he may perish without a friend, on a pallet of straw, in the garret of an almshouse; still more, blessed with the best gifts of nature, the best opportunities of education, the fairest prospects of usefulness—"bearing his blushing honors thick upon him"—he may live to see himself a reprobate and an outcast.

It is in this perfect liberty of making himself what he chooses to become, that our institutions confer upon the individual, or, rather, do not wrest from the individual, the highest prerogative of his nature—what may be rendered the greatest blessing of his existence, or will prove, by his own fault, the cause of his misery and ruin. An arbitrary government, on the contrary, prescribes not only an unequal distribution of political power, but, for most practical purposes, its effect is to counteract the influence of moral distinctions, to repress the tendencies of nature, and to doom individuals to penury or affluence, to offices of dependence or to elevated stations, not according to their merit, as tested by fair competition, but solely with reference to accidental circumstances. Thus the heir of a throne may be a profligate spendthrift and an abandoned libertine; and yet a mitred bishop shall place the crown upon his head, the laureate shall hymn his praises, and all ranks and classes implore blessings on his reign; while the poorest subject of his realm, however meritorious, is suffered to pass his life in wretchedness, and to end it in despair. Thus, too, talents combined with learning and integrity, may only render a plebeian odious and suspicious, while a moderate share of these distinctions will raise a patrician to the pinnacle of fame,

or, perhaps, the utter want of them will constitute the chief qualification of a prime minister or a pensioned favorite.

Examples of such moral outrage are becoming rare. The spirit of our institutions, already diffused far and wide, has aroused individuals to a perception of what is due to talents and character, as well as nations to a sense of their political rights ; so that now merit is every where emerging from obscurity, and worthlessness retreating from the stations, where it had so long withstood the public frown. But it is still easy to perceive, that, wherever absolute establishments, whether civil or religious, exist, the individual may struggle in vain to acquire the influence and estimation, which amongst us to deserve is to possess.

The age, too, as well as the country in which we live, is propitious to self-improvement. So far as public opinion does not cringe to the power that would overawe, nor is seduced by the flattery that would debase it, there is nothing more honorable or more honored than individual exertion, in any and every department of usefulness. There never was a period in the history of human improvement, when so much was attempted or effected by the labors of individuals. In science, in literature, and in the arts, conspicuous examples of arduous efforts and encouraging success adorn the present age. Many an individual of our times, believing with Sir William Jones that whatever had been attained was attainable by him, has burst the chains of prejudice, has conquered difficulties, has withstood temptations, has acquired habits of self-control and self-application, and has persevered to the accomplishment of all that ambition could virtuously desire, and earned a fame which posterity will venerate.

Individual competition is the most powerful incentive to exertion ; at the present day how vastly enlarged is the field of its exercise ! From the extension of commerce, and by means of the press, every event, every discovery, every experiment, every plausible undertaking of every individual in any one civilized country is speedily published in every other. Inquiry

is excited—criticism becomes active—every thing is brought to the test of philosophical analysis and practical proof—defects are exposed—improvements are suggested—ignorance is rebuked—sophistry is refuted—useful inventions are scattered—useful knowledge is diffused—discovery treads on the heels of discovery—and while each individual scarcely finds himself without a rival, he perceives the wisdom of converting rivalry into a source of encouragement and confidence.

It is thus that individuals throughout the world, are at the present moment stimulating each other forward in the race of true glory. It is by this wide-spread emulation that they are brought to realize their various powers, and the unprecedented means of influence which are placed within their reach. The striking events, fresh in the memory of the present generation, what are they but the efforts of individuals, roused to action by powerful motives within and without them, and exhibiting throughout their career of wild ambition or virtuous self-devotion, in their merits and in their faults, the indelible impression alike of the times and of the men? I do not mean to say that it is the only praise of Napoleon that he was the great man of great occasions; but it is to hazard little to assert that he did homage to the spirit of the age in his institutions—that whatever is laudable in his taste, his ambition, his designs, and his achievements, bears the character of the age—and that it is the severest censure of his errors to pronounce them a libel on the age. Elevated by extraordinary events to the height of military glory—possessing as an individual the greatest power for good or evil which was ever allotted to a mortal—he seemed, as if incapable of moral perception, to shut his eyes to the prospect of brilliant usefulness which the world saw spread before him, and rushed in madness and in folly to the consummation of his earthly destiny, leaving it for biography to unveil his motives, and for history to record his crimes.

“He left the name, at which the world grew pale

“To point a moral, *and* adorn a tale.”

In respect to the recent revolution in France, what does it illustrate so strikingly as the atrocious stupidity of one individual, the fugitive and almost forgotten monarch, and the magnanimity, the wisdom, the disinterestedness, the exalted patriotism of another individual, the brightest living example of the glorious distinctions of our country and of the age? Here has been a notable proof that the rank of a king can no longer screen the guilt of the individual, and that an individual may refuse a crown, and yet exert a greater influence over government and people, than was ever yielded to the arms or diplomacy of allied sovereigns.

Perhaps the sequel of this Revolution will strikingly show, that from the want of other individuals like Lafayette, that is, from the want of individuals whose opinions have been moulded, whose habits have been formed, whose hopes have been excited, whose very taste has been inspired by a political system such as Lafayette contributed to establish, by a train of circumstances such as those by which he was surrounded, and by examples such as he witnessed in America, what has been already gained in France may be recklessly and shamelessly lost. Can any thing be more plain, than that in France the project of "a republican king" has been proved as great an absurdity in fact, as it was declared to be in terms? Under the present constitution of the government, has any evil become more apparent, than its incompatibility with the advancement or even the political security of individuals, in whom more than any others the country has had occasion to manifest its confidence, and upon whom it is anxious to bestow its honors?

At the time of the first delivery of this lecture, the French Revolution was but just achieved. It was hailed here as well as in France as a successful triumph of the popular will. Lafayette had been seen to re-assume his commanding station at the head of the National Guard. Having gained alike the

ear of the king and the hearts of the people, generously, ardently, and sincerely devoted to the promotion of their mutual interests, it seemed as if neither could soon or ever become so far insensible to the value of his services, as to seek to detract aught from his standing or his fame. But notwithstanding the Revolution, the government of France continued hostile to republican principles and a republican policy; and for obvious reasons the presence, the advice, the entreaties, the remonstrances of their vigilant guardian and faithful champion soon became as obnoxious to Louis Philippe as to Charles the Tenth. It was not for Lafayette to degrade or dishonor himself. It was not for him to play the part of a sycophant and courtier. He could not but regard the king as equally with himself the servant of a common sovereign, the people; and as owing like himself the highest personal and official allegiance to the constitution which they had both subscribed, and to the liberal principles, which they had pledged themselves to each other to support. It was for Lafayette again to experience that it was in vain for him to attempt to be an American in France. It was for him, as I may say, to instruct us most impressively, that it is in vain, and worse than in vain, any where out of America, for an individual to trust himself as a political reformer to the purity of his motives, the weight of his character, and the lustre of his fame. Lafayette had but recently come to America; and here, from village to village, from city to city, from state to state, he had been accosted by the throng of free and happy citizens, who were ready and eager to honor him as the friend of their fathers, and the disciple of their Washington. He came here in his old age to witness the success of the cause, for which he had sacrificed the blood and treasure of his youth; and he returned to France re-animated with the hope of doing something at least, that might prepare the way for establishing in the land of his birth the political system, which he had seen thus richly blessing the country of his adoption. The popular feeling in France responded to his design; and the precipitous self-destruction

the last of the Bourbons afforded an occasion which was all that he could have wished. The feelings of Lafayette revolted from deeds of violence. He desired a peaceful revolution. At the head of the army and of the people, he does not appear to have conceived a single purpose of ambition. The good of his country, the example of America, were the engrossing topics of his contemplations. He saw, or he was persuaded to believe that he saw insuperable obstacles to the erection of a republic upon the ruins of a monarchy. He was conciliated by the acts of liberality and patriotism which had acquired for the Duke of Orleans and his son so large a share of public favor. He was induced to hope, that even if the power of a monarchy were entrusted to such hands, under the guardianship of constitutional restraints, the people of France might enjoy an undisturbed equality of personal rights, and have an opportunity of preparing themselves for the unlimited exercise of political privileges.

With such a purpose, it is not too much to say that Lafayette conducted Louis Philippe to the constitutional throne, and placed himself by its side, its sworn supporter. But Louis Philippe found it more easy to be a king than a republican. Nor was he slow to perceive that the feelings and habits of those around him had hardly changed with the change of government, and that, if he could relieve himself from the oversight of Lafayette, it might not be difficult to procure a general assent to all that was necessary to secure a virtual recognition of the ancient prerogatives of the crown.

Lafayette has submitted to the masked policy of the king with evident disappointment. But although dismissed from the service of the king, he is retained in the service of the people. He is still the individual, to whom all eyes will be again directed in the hour of peril, and who cannot be divested of a personal influence which Louis Philippe well may envy, and for which he may have cause to tremble.

Let it not, then, be forgotten, in estimating the character and services of Lafayette, that his education, his principles, his

taste, his feelings are purely and eminently American—that in honoring him we but honor ourselves and our institutions—and that we may safely and proudly refer to him as an example of the influence of our country and age upon the character and condition of the individual. Let us attribute to the want of others like himself, rather than to any want of principle or exertion on his part, the doubtful result of the existing political arrangements. Let us hope, that, through his influence and under the guidance of an enlightened patriotism the work of reform may be completed without the recurrence of scenes and events, which have been recorded in letters of blood in a preceding chapter of the history of France.

If then, it be one of the blessings of our country and age that each individual is entrusted with a power of distinction and usefulness of incalculable efficiency; if the highest public honors and dearest private comforts are here alike accessible to all; if the influence and fame of an individual may now be circulated throughout the civilized world; if the examples of the present day serve to show the pre-eminence which may be attained, how important is it that every individual amongst us should understand his responsibility and his duties? So far from his situation in life being fixed by its original circumstances, nothing can be more certain than that it is not fixed, and that he must rise above it or become degraded, accordingly as he improves his opportunities or abuses his privileges. The means of improvement are liberally supplied; they consist in whatever will tend to exercise his faculties, to strengthen his mind, and to elevate and adorn his character.

I hold it to be a positive benefit of the Lyceum that individuals voluntarily associate for the single purpose of mutual improvement—that all distinctions except those of individual merit, are unknown—that the object is to communicate instruction to each individual—and that the individual is compelled in a measure to task his powers, to test his proficiency, to ascertain and supply his defects, to compare himself with others, and by such comparison to learn to do justice to their

pretensions, and to realize his own claims, advantages, and obligations. At the Lyceum he beholds a spectacle, which could not be exhibited, except in such a country and such an age. He finds assembled on terms of equality, and in a spirit of mutual respect, all classes, all ages and both sexes. He listens to speakers, who proceed from and return to the ranks of hearers, and who are themselves taught by teaching. He finds others thus capable of imparting, and himself capable of acquiring the greatest variety of useful and entertaining knowledge. He studies the examples of intellectual and moral worth, of literary proficiency, of mechanical ingenuity, of practical usefulness in all forms which are presented for his imitation. He beholds with delight the phenomena of the external world rendered intelligible by ocular demonstrations. He surveys, also, the world within. He sees, he feels the power of mind. He is induced to reflection. He resolves upon action. His ambition becomes purified as it is elevated : and the whole effect of circumstances is to contribute to the happiest result.

Of how many individuals has the fact been recorded, that their early connexion with associations, approaching in a greater or less degree to the character and design of the Lyceum, has contributed more than any other incidental cause, to the growth and development of their natural endowments ! I will refer to two of the most illustrious instances of our times—Henry Brougham and Henry Clay. The former while but nineteen years of age, laid the foundation of his reputation in a brilliant effort before the Debating Society of Edinburgh, which has also proved the favorite forum for the display of the youthful talents of many of his most distinguished contemporaries. The latter rose to fame under similar auspices ; it was in yielding to a sudden impulse at the meeting of a debating club in Lexington that he was enabled to overcome the timidity and embarrassment which had elsewhere oppressed him, and first exhibited the evidence of his extraordinary powers of oratory. The former may now be seen proud to descend from the summit of political preferment to honor with his presence

the ordinary meetings of the "Society for the Diffusion of Useful Knowledge," and devoting his official leisure to literary labor for the promotion of its objects. The latter is known as the unwearied advocate of the most practical schemes of popular improvement and social benevolence. Of both these individuals the truth cannot be too often told that they are the ornaments of the most enlightened age and of the freest countries in the world; and this truth will not be properly appreciated, unless it is considered that to the circumstances connected with the time and places of their birth they have mainly owed their reputation and usefulness. In no other country of Europe, and at no preceding period of the history of England, would Henry Brougham have been permitted even to acquire notoriety; and no where but in America, and never until now could services like those of Henry Clay in the cause of liberty, of patriotism, and of philanthropy, have been conceived, attempted, and accomplished.

How instructive are the examples of such men, as, apart from political connexions, and for the single object which has been proposed, we may be permitted to regard them! Born in obscurity, bred in seclusion, by dint of the severest exertions of the highest faculties of the mind, they have been seen to advance, as it were, *pari passu*, to the proudest distinctions of forensic and parliamentary eminence; attracting to themselves the notice and admiration, not of their own countries only, but of the civilized world, and inscribing their fame, not in the perishing memories of a contemporaneous generation, but in institutions which will outlive centuries, in systems of policy which will constitute the land-marks of national greatness, and in a written eloquence which will be treasured in every language that future ages will delight to esteem classical! How instructive are the examples of such men, when their biographers point us to the incidents of their early life, and show the powerful influence of their connexion with an institution like the Lyceum in fixing the bent, or at least in

quicken the development of the latent genius, of which they had been till then the unconscious possessors !

It is not for us to expect that the Lyceum will be instrumental in producing many such instances of intellectual proficiency ; but it cannot be a vain hope, that in the bosom of every community there may be talents and virtues, neither confined to age, nor rank, nor sex, which will be roused to exertion and brought into notice through its direct and indirect operations. It cannot be a vain hope, that individuals under similar circumstances will apply to themselves all the motives, and will feel that they have a right to claim for themselves all the encouragements, which the highest examples are suited to impart. It surely cannot be a vain hope that they will learn from their experience that the effort to improve is improvement ; that the presence of others is an unfailing incentive to exertion ; that there is no limit to the humblest capacity, but that the mind, by the aid of contingents which will render it active, vigorous, and expanded, may prove to every individual the source of immeasurable usefulness, honor, and happiness.

II. Society being composed of individuals, it follows that whatever tends to elevate or depress the condition of the individual, must produce a corresponding influence upon society. The accidental circumstances, which constitute the rank of the individual without reference to his merit, control society in a greater or less degree in every country but our own ; and, again, society is every where characterized by advantages and wants peculiar to the age, which deserve consideration.

'The nobility,' and 'the gentry,' titles of the highest classes in Europe, are with us, in their specific application, terms of derision. We sometimes imagine a nobility of nature, when we pay homage to intellectual greatness, and we commend the strictness of principles and propriety of manners that are the professed characteristics of accomplished gentlemen. We have been accustomed to attach sufficient importance to wealth. We seek to multiply the forms of refinement. We doat upon luxuries. We suffer ourselves to be hurried into the excesses

of fashion. We have our great men and our higher classes. We discriminate between styles of living. We speak contemptuously of the great vulgar, and the little vulgar. There are those who deprecate the influence of an aristocracy, and others who live in terror of a mob. And yet, notwithstanding these seeming imitations of foreign manners, and customs, and caprices, and follies, there is nothing amongst us more truly American, than, if I may so denominate them, the principles of society. When, therefore, I say that we deride hereditary titles of nobility, and ridicule those who profess to have been born gentlemen, I mean only that we are true to the spirit of our institutions, which inculcate natural equality, and prompt us to treat all assumptions of this sort as preposterous. And when I refer to the disposition which evidently exists amongst us to adopt foreign fashions, manners and prejudices, I do it for the sake of showing by these very examples (as painters resort to caricature, in their sketches of society), how completely they have here failed to produce the effects that give to them all their value abroad.

Upon this point it is wise to rely upon observation and experience. Show me the instance in which the attempt has been made to appropriate wealth to the gratification of what is styled a taste for luxury, and elegance, and high life, in which the result has not proved that the short-sighted novice has totally misunderstood his own interests and also public sentiment. Abroad he may have witnessed that a splendid establishment is not only an agreeable but a necessary appendage of rank and fortune; but he commits a fatal error if he does not perceive that here its only effect will be to lessen his influence, to empty his purse, and, in the end, to turn him upon the community, of which he had vainly thought himself independent, abject and disconsolate. Show me the instance, in which the affectation of superiority of any sort, whether leaning upon wealth, or family connexions, or personal accomplishments, has not terminated in mortification and disgrace. Show me what, after all, fashion has ever gained for its delud-

ed votary, beyond perhaps, the momentary gaze of a passing admirer, or hasty and heartless friendship succeeded by cold and lasting neglect ; or what effect it has produced upon the character, other than the extinction of natural delicacy, and a fastidious disregard of true moral refinement. Extend your recollection throughout the range of your acquaintance and point me, if you can, to a single instance, where external circumstances alone have secured consideration, respect, and influence without abatement or without reverses. I am happy thus to infer from what I believe to be the uniform testimony of facts, that the factitious distinctions which prevail abroad, exist here, only, as it were, to demonstrate the absurdity of their pretensions. I am still more happy to believe, that they are gradually yielding to enlightened views of real life and of our proper condition.

What, is it asked, are the principles of society on which we are dependent ? Fortunately, be it answered, it is not so much for us to adopt, as to recognize them. They are engrafted upon our institutions. They are the cement of the political fabric. They are to be traced in the example of our ancestors. They enter into our opinions, feelings, and habits. They adhere to us through all changes. We lean upon them in adversity, and in the height of prosperity we find it in vain to attempt to rise above them. They are to be learned by observation and experience.

We have classes in our society ; and it is easy to foresee that we must always have them. But tell me, from what you see and know, how are they constituted ? Perhaps you will be inclined to answer, that the first class comprises the rich, the learned, and the fashionable. Such is the common impression ; but this description is by far too general. There are rich men, respectable and respected, who adorn high stations ; there are also rich mén, despicable and despised, who have sunk into the lowest. Learning often confers upon its possessor undying honors ; it has sometimes served to immortalize his infamy. All classes pay more or less deference to

fashion ; the shameless wanton may be the most fashionable of her sex. Perceiving the necessity of being more minute, you will now tell me, that our first class consists of those who do not pervert wealth and learning, and who only defer to fashion according to their circumstances, from a willingness to obey universal custom, and never in violation of good sense and decorum. The description is more satisfactory, but it is still imperfect. Who are the rich men and the learned men, that fill high places in society ? They are known to us, thus far, only as those, who do not abuse wealth and learning. How do they use these supposed distinctions, and how have they acquired them ? Inquire into the history of such as must occur to your recollection, and tell me if I am not right in saying that they are memorable instances of industry, perseverance, economy, temperance and honesty, struggling against obstacles, and gradually attaining to the elevation which is accorded to them by general consent, in consideration of their talents, the extent of their influence, and the benefit of their example. Am I not right in saying that a large proportion of those, who now constitute, and who have always constituted the highest class of our society have had their origin in the lowest ? Am I not right in saying that our richest merchants owe their wealth to their own exertions, and that the most distinguished members of the learned professions have earned their reputation by the daily and nightly toil of successive years ? Am I not right in saying that they can maintain their standing only so long as they maintain their principles, and apply their means of usefulness to proper ends ? Am I not further right in saying, that their acquisitions, at their death, are beyond their disposal, that a large fortune distributed amongst heirs is usually scattered to the winds, and that the treasures of learning can only satisfy the avarice of the mind ?

The organization of the first class of our society, then, has reference as much to the respectability and usefulness of the individuals who compose it, as to their wealth and learning.

Wealth or learning they are likely to possess ; because, apart from prejudice, it is plain that these are the ordinary results of human exertions, as directed to different pursuits, and when justly appreciated and properly used, they imply the substantial comforts and proper ornaments of life.

I have said that our society will ever be divided into classes, and I have referred to what must be regarded as the only permanent distinctions of the highest class. It ought further to be remarked that the constitution of one class is the constitution of every other—that they are only distinguished by different degrees of attainment—that they propose the same objects of pursuit—that no barrier is interposed between them—but that, like the arrangement of guests at the table of Cyrus, merit is promoted from the lowest grades, while imbecility, indolence, folly and vice are constantly receding from the highest. I repeat it, there is none so low in the lowest class, that he may not raise himself to honorable distinction ; there is none so high in the highest, as to be secure from degradation, if he stoop to infamy. This is the alchemy which converts the meanest substances into gold, and which detects alloy in the most glittering metals. These are the principles which are at work in all the changes that we witness and experience, and which lie at the foundation of society as it exists with us. “It is in England,” says Sir Richard Steele, “come into our very language as a propriety of distinction, to say, when we would speak of persons to their advantage—*they are people of condition*.” In America, none can deserve, or should desire higher praise, than to have it said of them—*they are people of merit*.

The relation of classes in our society deserves to be further considered. Here, as elsewhere, the progress of society is indicated by the degree of advancement of the higher class ; but it should be remembered, that here, not as elsewhere, the advancement of the higher class depends altogether upon the improvement of the lower.

In Europe, refinement is co-existent with barbarism ; it

being in the nature of her institutions that the extreme of luxury should meet the extreme of want, and that those only should be admitted into high life, who are born in the midst of it. Property and rank are secured to the possessors during life, while the laws of entail and primogeniture provide for their transmission. In this manner a permanent aristocracy is established, which can exist only by virtue of its independence of the great mass of the population; and which will seek to maintain its independence by monopolizing the influences of wealth, knowledge, and even religion. Society is forced to accommodate itself to institutions thus reared and thus sustained. It is "divided horizontally." The upper class becomes such by birth; and the political design is to keep it uppermost by placing within its reach, and by placing beyond the reach of the lower class all social as well as political advantages. It is thus, as I think we may see clearly, that, under every government except our own, the superiority of one class depends upon the inferiority of the other; and that the permanent separation of the two classes is sought to be maintained, as it can only be maintained, by super-adding to political restraints the influence of all the causes that affect the improvement of individuals and society. Such a policy is opposed to reason, and is an offence against nature; and, sooner or later, reason and nature, enabling men to understand their rights, and prompting them to feel their wrongs, by those mighty revulsions, which have so often shaken government and society to their foundations, restore the equilibrium alike essential to political and social harmony.

In our country such a revulsion (not so violent as elsewhere, because preceded by a gradual amelioration), has resulted in a political and social system precisely the reverse of that which has been described. This system is founded in opposite principles; it proposes a different end, and therefore requires a resort to different means. So far from rendering the great body of the people politically powerless, it recognizes the people at large as the rightful possessors of all political power; and so

far from attempting to regulate society, contrary to reason and nature, for the benefit of a part, it leaves society to regulate itself, according to reason and nature, for the benefit of the whole. Conforming to the analogy of nature, while it gathers fruit and flowers from the branches which are above, it proceeds upon the principle that the branches which are above can only grow from the root which is below. Sowing the seeds of improvement every where beneath the surface of society, and to a greater or less depth accordingly as they are designed to rise to a greater or less height, it leaves them exposed to the common influences of the light of knowledge and the vital air of freedom, which, by the law of such a system, must be universally diffused. The seeds being various, their growth and functions will be various; but still, true to nature, the system causes such variety to result in mutual dependence, and the imperfection, which constitutes the dependence of each part, to contribute to the perfection of the whole. The oak supports the ivy—the ivy adorns the oak; and while the giant of the forest, “upreared from the lowest depths,” spreads his broad arms to hail the sunshine and to grapple with the storm, he affords a quiet shelter and a peaceful shade to such as neither rise so high nor sink so low, but yet proceed from the same earth, and point upward to the same heaven. Our society, therefore, while it discards absurd and artificial distinctions, retains those which are reasonable and natural. It admits and requires the most minute classification; but it makes each class essential to every other, and relies upon the lowest to sustain and balance all that are above it. To use another metaphor, it seeks to rear in the human desert a pyramid of social happiness, which shall exhibit the perfection of political skill and moral taste, and must therefore be constructed, upon the true principle of architecture, that the elevation of the summit shall bear a fixed proportion to the expansion of the base.

The object of other systems, as has been seen, is, by force of law and prescription, to secure to one class of society the ex-

clusive and permanent possession of external advantages. Our system, on the contrary, does not interpose any political barrier against the innumerable vicissitudes, to which it is the obvious design of nature that all classes of society, all human beings, should be ever and every where exposed. With us, it may be asserted in the broadest sense, neither law nor prescription have established any land-marks; and so resistless is the tide of revolution in every sphere of society, that there is practically nothing constant but change. In this view, while exposed to so many vicissitudes, while no reliance can be placed on external circumstances, how much does it become us to multiply those social employments and enjoyments, in which all classes may participate, and to which we may cling, with increasing satisfaction, amidst the alternations of prosperity and adversity, that are here the common lot!

The Lyceum is adapted to the condition of our society. Its doors are open to all. Its objects are interesting to all. Its success must be beneficial to all. It calls together all who wish to improve themselves. It renders them instrumental in the improvement of others. It seeks the good of society by diffusing correct sentiments, liberal feelings, and useful knowledge. It recognizes no distinctions, it creates none but those of intellectual and moral worth. Who does not perceive that at its weekly meetings society assumes a different form from any which in our community is elsewhere exhibited? Here is none of the extravagant display of fashion; a worthier object attracts notice and excites admiration. Here is no excess of luxury; it is incompatible with rational entertainment. Here, on the other hand, is no vulgar sport; the passion for it is extinguished. Here there need be no want of refinement; whatever adorns the character is inspired, fostered, and honored. Here is no arena for political strife or religious controversy; the Lyceum is dedicated to the single object in which all sects and parties may cordially concur. While the characteristic animosities, follies, and vices of all classes are excluded by the avowed purposes of the institution, whatever is estima-

ble and virtuous in any one class is readily associated with kindred traits in other classes; and thus while in fact each class is drawn hither by the impulse of a common desire for improvement, all are gradually led to acquire a common taste, a common sympathy, and a common attachment. Is there not here presented a bright combination of social attractions, and a wide scope for the influence of the best principles and the best affections? Who has not experienced that social improvement and enjoyment are blended upon such occasions? Who has not learned to think moreseriously of his social obligations, and to correct his sentiments and feelings in regard to others, towards whom he had suffered himself to cherish unkind prejudices, habitual aversion, or, it may be, a mistaken resentment?

The leading interests of society are to be here studied, discussed, illustrated, and explained. The arts which supply our wants, multiply our comforts, and embellish our external condition—the sciences which lie at the foundation of these arts—the sentiments and habits which fix the standard of public opinion, and give the tone to public morals—whatever concerns us in the intercourse of the world—these are subjects which must constantly recur in lectures and discussions. Practical information, judicious suggestions, seasonable hints, striking views of common relations and duties will thus serve to fill up and enliven the hours which we pass here, and will enable us to go back to our firesides and the ordinary walks of life better fitted for the employments, and with a purer relish for the enjoyments that await us there.

III. I am next to speak of the political rights and privileges, and corresponding obligations and duties of American citizens at the present day.

We have undertaken to govern ourselves. We have chosen to retain in the hands of the many the power, which, whenever entrusted to the few, has been converted into tyranny. We bow to the will of the people as the supreme law.

We trust to public opinion, to protect our rights, to promote our interests, to cure evils, to avert dangers. While abroad, the administration of government can hardly be changed without violent commotion, anarchy and bloodshed, we effect quiet revolutions at the ballot-box in the election of every new Governor and President. We repose beneath the standard of civil and religious liberty, and we offer to the oppressed of all nations a safe asylum and a cordial welcome. We cling to our institutions after an experiment of more than a half-century, and we contemplate results flattering to our national pride. We hesitate no longer to believe that our system is practicable; and while we are not unmindful of present evils and future dangers, we rely upon the ability of the people to work out their political salvation, even, if it must be, at critical periods, with fear and trembling.

How unpretending and yet how effective, how simple and yet how perfect is our form of government! It proceeds from the people, it depends upon the people; and yet, for all necessary objects, it controls and restrains the people far more effectually than the most rigid despotism. It was founded in open defiance of the majesty of a king; it subsists by enforcing submission to the majesty of law. At a period like the present, when its garrisons are deserted—when no military force is visible—when its officers of all grades are mingled in the mass of population—when the press publishes with boldness, nay even with effrontery, the views and purposes of every party, the opinions, suggestions and insinuations of every individual, it exerts a power, which, the less it is seen, the more it is felt, and which, identified with public opinion, is supported by the very freedom, that, if it were constituted like any other government, would serve to overthrow it. How true is it, that the devices by which every other government is sustained, could only have the effect to endanger our own! A standing army is an object of terror, not to the enemies, but to the friends of our institutions; to subject the press to a censorship were to kindle a political volcano; and to separate the officers of

government into a distinct and permanent class, were, by this very act, to divest them of their authority.

If the perfection of our government consists in its simplicity, its security results from the complex distribution of its powers. It was formerly decried as a many-headed monster. Time has shown that the greatest political monster is a government which has but a single head, and must fall a victim to the weakness or madness of an individual. Experience has proved that it is only where laws are framed by the deliberations of many heads, and are administered by many hands, they can secure the approbation of many hearts; and it is a maxim as old as the oldest government, that heartless obedience is incipient rebellion.

Without detracting from the manifest wisdom of the founders of our system, it is clear that it is indebted for many of its advantages to the circumstances under which it was established. It was most fortunate, that, before the adoption of the Federal Constitution, there existed several distinct states, previously provinces, who, although they had become convinced of the necessity of a general government to concentrate their resources, to render efficient the means of military protection, to provide a permanent and uniform revenue, to regulate commerce, and to superintend foreign relations, had also learned that the executive, legislature and judiciary of each state were sufficient and most suitable for the management of its particular concerns. It was fortunate, also, that towns and plantations should have had a separate existence before the establishment of the provincial governments. The most effectual mode of administering municipal affairs was thus ascertained, which has been wisely preserved, in a great measure, in its original simplicity. Our union, vast as it has become in population and resources, is but an aggregate of divisions and subdivisions of power, combined, if I may so say, upon a principle of political induction.

Consider, for a moment, one of the principal divisions—the State of Massachusetts. Our citizens are reared in towns, which provide schools for their childhood, which maintain asylums

for the poor, which protect the public peace and the public health, and which, in short, adopt and enforce all necessary and wholesome police regulations. Here, even in this limited sphere, are appropriately blended the legislative, executive, and judicial functions, as exercised respectively by the primary assemblies of the people, the selectmen and co-ordinate authorities, and the justices of the peace. Towns are arranged into counties; and we have county magistrates, to whom are committed the care of roads and prisons, the probate of wills, the registry of deeds, and sundry financial and semi-judicial trusts. The next and crowning jurisdiction is the government of the State, complete in its organization, and devoted, in its separate departments, to the enactment, interpretation and execution of the laws, which are required to protect rights of person and property, to secure equal and proper privileges, and to advance the interests of learning, virtue and piety. The Supreme Executive power, guarded from abuse by positive limitations, is vested in a governor, who is surrounded by responsible advisers. The legislature is divided into two branches, with a negative upon each other, and clothed with the appropriate functions of a deliberative assembly. The judicial tribunals, arranged with reference to the necessity and importance of their services, are connected with juries, who share with them the sacred trust of dispensing prompt and substantial justice. With the exception of judicial officers, who hold their stations for an obvious reason by a different tenure, these various functionaries are created by periodical elections, and are thereby held to a strict accountability for their public acts. At these elections, every citizen, who is not a pauper or a criminal, is entitled to exercise the right of suffrage, and is moreover eligible, with slight limitations, to every office in the gift of the people. Every citizen, also, who enjoys the privilege of an elector, is liable, unless specially excused, to perform the duty of a juror. It is thus that a large portion of the citizens are for the time being incumbents of the various offices of the town, county, and state; and, from the effect of rotation, hardly an

individual is released from devoting his talents and a portion of his time to the public service. The State, again, as a member of the union, is obliged to send its senators and representatives to Congress, and to answer all the calls that may be made upon its citizens, from the other civil and also the military and naval departments of the general government. Massachusetts is but one of twenty four states, and so similar is the internal organization throughout them all, that the political rights, privileges and duties of the citizens of the several states are, as nearly as may be, equal. As the national territory is extended, and population increases, so far from infringing the original system, it is only necessary to create new states, which become at once the favored members of a growing and happy family. Indeed, what is there more gratifying, amidst all our bright prospects, than to see our republic gaining strength and unity as it advances in power and prosperity—the tree of liberty more firmly rooted in its native soil, as it sends forth new and vigorous shoots from the parent stock !

If then, by the provisions of our system, political power is so distributed, that every citizen may be expected to share in its exercise while he submits to its authority, how important is it that all should acquire, as far as they may, the necessary qualifications for the discharge of civil trusts ? Apart from common learning, of which but few among us are destitute, and moral and religious principle, which is the only pledge of integrity, there are acquisitions in political science, in the principles of law, in the practice of legislation, in history, in statistics, in technology, invaluable in their uses to all who are officially required to consult and promote the public welfare, and not without interest to the retired observer of passing events. As it respects the business of making roads, the simplest department of public labor, there are none, probably, who possess the art by instinct ; and there are not many, perhaps, who have learned so much by observation and experience, that they might not be benefitted by a little study of a subject, which has employed the pens of sensible and judicious writers. In

the pauper system, how many abuses might have been prevented, and how much economy introduced, and, most of all, how much might its benefits have been extended, could it have been made the subject of thorough investigation and free discussion, and could even the statistical details, which have been collected without any uniform aim or method by disconnected inquirers, have been properly submitted for public consideration? In the management of prisons, what shocking errors, offensive to the judgment and excruciating to the feelings, were tolerated for years without seeking for a remedy, while, within a recent period, the mere business of inquiry, conducted by a single individual, has led to improvements that change the character of penitentiary discipline? In respect to public schools, how much is constantly to be gained by inquiry and the comparison of opinions?

To pass to subjects of State legislation, how numerous are the topics on which information should be sought and may easily be acquired by all who strive to qualify themselves for the duties which so many are ready to assume? The provisions of the constitution, often deserving of serious consideration in reference to proposed amendments—a system of finance, or the wisest method of imposing equal burthens—the extent to which laws should be carried to enforce the fulfilment of contracts, and for the punishment of crimes—the banking system, its complex operations, its tendency to irregularity, and the best mode of rendering it compatible with the public security—the system of licences, in regard to which such vague notions and irregular practices yet prevail—the scope and policy of internal improvements, comprehending so many novel applications of art and science, and such a variety of private and public, temporary and permanent interests—but it were vain to pursue this catalogue. It were still more vain to attempt to refer to the still more numerous objects which must engage his attention, who, released from the duties connected with the administration of the affairs of the town, county and State, is summoned to deliberate upon the multiplied interests

and vast concerns of the country at large. Suffice it to say that even these, in all their extent, deserve, when he has leisure to bestow on them, the attentive consideration of every patriotic citizen. I will only say, further, that in addition to the necessity of proper qualifications in all who hold offices, when it is considered how every thing under our government depends upon the purity of elections, upon the discreet and sober exercise of the elective franchise, and upon the firmness, intelligence and integrity of jurors, there is no language that can express the importance or over-state the duty of spreading far and wide, wherever our free citizens are found, the means of necessary information, without which they will strive in vain to discharge the trust, for which the living world and future ages hold them accountable. Information so various and extensive, but few can acquire in schools or from books, and it is only by social intercourse and mutual instruction that it can successfully and most profitably be imparted.

Let the Lyceum be devoted to this as one of its leading objects. While the ardor of patriotism glows in every breast, let a continued effort to qualify ourselves for public usefulness in whatever sphere our services may be acceptable and our circumstances will permit us to render them, attest the purity of our zeal. While we rejoice in the flattering prospects of our country, when, as now, the curtain has not been lifted from the dark side of the picture, let us remember that these prospects are to be realized but upon one hard condition—that we resolve, each for himself, to be worthy of the country, and to devote mind and body, heart and soul, to the acquisition of knowledge, that we may understand our duties, and of virtue, which alone can supply the ability or even the disposition to perform them.

When it is considered that the members of a Lyceum come together as a promiscuous assemblage of citizens with no other object than that of mutual instruction in all that refers to their mutual interests, I ask you what occasion can be afforded more suitable for the dissemination of information upon the

various political topics, that are more or less directly involved in the various civil relations, which it is the privilege and duty of all ranks and classes of the American people to sustain and exercise? How much is each individual in every community compelled to feel the want of a familiar acquaintance with political subjects of common interest, which it is in the power of some other individual promptly and amply to supply? How much may be done at the Lyceum, to spread before our people collectively correct information of the progress of political events at home and abroad, which comparatively few among them have the leisure or opportunity to obtain from books or even newspapers? How easily may they be here instructed, from time to time, in whatever relates to their municipal affairs, and the more important designs and measures of the State and national governments? What an opportunity is thus presented of exhibiting, in the simplest details, the diversified resources, whether natural or acquired, local or universal, immediate or contingent, of which, under the auspices of a republican policy, intelligence, enterprise and industry may avail themselves? How easy may it be, in the form of lectures and discussions, to collect and compare the important facts and considerations, which enter into every question affecting the public welfare, whether in reference to our domestic or foreign interests? How easy, too, how interesting and how proper will it be, in the presence of such an audience as is collected at every Lyceum, to refresh the recollection of the prominent scenes and incidents, which illustrate the memorable epochs in our national history? How grateful will it be to recount the services, to portray the characters, and thus to present for imitation the examples of public benefactors? Above all, in view of such occasions of direct communication with the great body of the people, how much may and should be done, by appealing to the recollections of the past, the benefits of the present, and the hopes of the future, to impress still more and more deeply and widely a conviction of the incalculable value of that blessed UNION, which consummated the

toils and crowned the patriotic aspirations of our forefathers, and which is the only suitable legacy that we, as Americans, can bequeath to our prosperity?

How much, indeed, may be done at the Lyceum, which has been done no where else, to explain to the people the nature and relations of political rights and duties, to inculcate the principles of political morality, and to counteract by an indirect, and for that reason, perhaps, more powerful influence, the petty intrigues and sinister designs of selfish, turbulent and deluded partizans? How much may be done at the Lyceum, which has been done no where else, to induce and enable our fellow-citizens more and more to exercise their dispassionate judgment and sober good sense in the disposal of their electoral suffrages?

It will not be the effect of the Lyceum, for it is not the effect of increased intelligence, to destroy diversity of sentiment, and to put an end to political divisions; but it may be hoped that its benign tendency will be to render such divisions less inveterate, less acrimonious, and less dangerous. When the great body of our people shall have rendered themselves so intelligent and virtuous as never to conduct nor suffer themselves to be treated as a mob—when they shall have sufficient confidence in themselves to trample upon every aristocratic pretension that is not based in merit, and to scout every bigot, hypocrite and knave, whose vaunted democracy is an arrogant pretext for profligate ambition and sordid avarice—when every popular meeting shall present the aspect of a deliberative assembly, and at every election every citizen shall conscientiously exercise the right of thinking and acting for himself, we may find cause to admire, rather than to deprecate our political divisions. Like the Lyceum, the Republic may then exhibit the delightful spectacle of the harmonious combination of seemingly discordant opinions, in which the various resources of different minds are seen to contribute in various modes and degrees to the common object of enlightening, improving and blessing all. It is a lesson of wisdom and experience, that the more we know of

ourselves and each other, of our personal and relative interests and obligations, and the more we compare our political, moral and religious condition as it is with what it may be rendered by generous sympathy, reciprocal forbearance, and cordial co-operation, the more we shall be disposed to abstain from unprofitable contentions, and, where opinions only are concerned, to agree to differ, conscious that such agreement is adapted to be alike the cause and consequence of mutual respect.

Who does not regret, as who does not perceive, the political animosities which now distract our country? Who, if he is but just to his observation and consciousness, does not acknowledge that all the evils which we suffer or apprehend are such and such only as the greater diffusion of political intelligence and morality would have prevented, and might remove? Who, that is not wanting in patriotism, will hesitate to admit that an institution, which addresses itself directly to the task of removing the cause of such evils, is admirably suited to the exigencies of the times, and deserves the support of all who witness or experience the want of its benefits?

IV. I can only presume so far upon your indulgence as to attempt a rapid and desultory sketch of the influence of the country and age in which we live upon the condition of man as an intellectual and moral being.

It may be supposed that the cultivation of the intellectual and moral powers has been sufficiently urged by adverting to their necessary agency in the improvement of individuals, the advancement of society, and the establishment and preservation of political institutions. There is another view of our actual condition, which shows more clearly the value and the uses of these capacious faculties. It were misfortune, as well as error, in the individual, to live entirely for himself. The claims of society are, for the most part, local and temporary. Patriotism is not an exclusive sentiment. It is the privilege of our nature, that we sustain a more extended relation with its corresponding obligations; and such, let it be remarked, is the adaptation of our talents and opportunities to the various pur-

poses of our existence, that fidelity to the highest trust is not incompatible with the proper discharge of the humblest duty. As men, in the largest sense of that comprehensive appellation, we are bound to promote the welfare of our whole race. As immortal beings, we are to strive for the acquisitions that will endure throughout our whole existence. It is in reference to these exalted ends, that knowledge and virtue are to be chiefly prized.

It is foreign to my purpose to attempt a philosophical analysis of the nature and properties of intellect, or to investigate the theory of morals. On this point, as on all the others, I prefer to appeal directly to your observation and experience.

Tell me then, what, as you regard it, is the human mind? Is it not that, which distinguishes man from the thoughtless brute, and from inert matter? Is it not that, which wields and subdues brute force to his will, and which moulds matter in all the forms that minister to his convenience or pleasure? Is it not that, which gives to man the privilege denied to other animals, the power of improvement? Is it not that, which enables him to perceive what he is, where he is, whence he came, and whither he is going; in other words, to understand his nature, to study his relations, to trace his origin, and to learn his destiny? Is it not the only organ of communication between man and man, between different nations, and distant ages? Is it not the only element of his nature which survives dissolution? Is it not the divine ray, which emanates from the source of eternal light?

Tell me, again, from your observation and experience, what is the mind without moral discipline? Although it expatiates in a world of its own, are there not laws to direct its course, to regulate its tendencies, and to render steady and harmonious its multiplied revolutions? May it not be abused, when it should be improved? May it not be darkened, when it should be enlightened? May it not be debased, when it should be purified? May it not grovel in the dust, when it should soar to the highest heaven? Have not human beings been

reduced beneath the level of brutes by the neglect or abuse of their intellectual faculties, almost as much as they have ever been raised above them by their proper cultivation? Have not nations sunk into ruin, from want of the redeeming influences of knowledge and virtue? Have not ages been buried in oblivion, without skill enough to rear a monument, or sufficient learning to inscribe an epitaph? On the other hand, is not every thing which is valuable in science, or admirable in art, every thing which is time-honored in political philosophy, every thing which is sacred in religious faith, seen to be closely connected with mental culture and moral discipline? Has not enough been recorded in history, is not enough present to our view, to verify the ancient doctrine that perfection in taste is closely allied with perfection in morality—that perfect goodness and perfect beauty are the same? Alas! that the fairest blessing should often have been converted into the foulest curse,—that learning, from being the hand-maid of virtue, should become the pander of licentiousness—and that it should have required oceans of blood to wash out the stains of intellectual depravity!

I regret that my limits prevent any attempt to do justice to this exhaustless theme. I can only say further, that, if intellectual as combined with moral excellence is the worthiest object of human pursuit, there is much in the circumstances of particular individuals and particular communities to accelerate or to retard their progress in its attainment. It is only where the mind and conscience are free from restraint, it is only where knowledge is supplied like daily food to satisfy the universal appetite, it is only where moral worth is acknowledged to be the brightest trait in private and public character—it is only where these advantages are combined, that man can become worthy of his nature, or even conscious of his destiny. It is liberty which expands the intellect. It is liberty that affords the opportunity to be virtuous. Why should there be any thing appalling in the danger which is seen to be incidental to liberty? Does it not rather become us to perceive and admire

the obvious design of their mutual connexion? "I know no method," says the great moralist of the times, "of forming a manly intellect or a manly character without danger. Peril is the element in which power is developed. Remove the youth from every hazard, keep him in leading strings lest he should stray into forbidden paths, surround him with down lest he should be injured by a fall, shield him from wind and storms, and you doom him to perpetual infancy. All liberty is perilous, as the despot truly affirms; but who would therefore seek shelter under a despot's throne? Freedom of will is almost a tremendous gift; but still a free agent, with his capacity of crime, is infinitely more interesting and noble than the most harmonious and beautiful machine. Freedom is the nurse of intellectual and moral vigor."

Would that I could sketch from history some of the most striking portraits of individuals, and also some of the most imposing scenes of national grandeur, and there point to blemishes and defects, which you would at once trace to the illiberal policy of other countries and of a different age! Would that I could show you by a strict and searching comparison, that we are the only people who bask in the unclouded sunshine of intellectual freedom, and breathe the invigorating atmosphere of moral purity! Would that I could convince you, that the condition of such a people is an incentive to usefulness, and a title to glory, co-extensive with the success of their institutions and the benefit of their example!

We live in an age of intellectual light. Science is stripped of the mystery, in which political and religious despotism had for centuries enveloped it. It is no longer cloistered in monasteries. It is no longer imprisoned in walled colleges. It is no longer buried in unknown tongues. It is no longer revered as supernatural inspiration. It is no longer the privilege of the few. It is no longer, as, while abused, it too often proved, the scourge of the many.

We live in an age of moral power. Whatever is opposed to civil and religious liberty begins to disappear. Thrones of

despots totter on their base. Limited monarchies yield to the pressure of equal rights. Popery grasps a barren sceptre. Protestantism breaks loose from ecclesiastical domination. Prejudice no longer obstructs the march of truth. The press abhors scrutiny and defies restraint. The haughtiness of aristocracy defers to the modesty of merit. Avarice is openly converted into beneficence, or hides its shame in obscurity. Good principles triumph in the conflict with error. Good habits attest the prevalence of virtue. Public opinion guards, regulates, and promotes the public interests.

In this country the liberal tendencies of the age are concentrated. Hence they have been diffused; hither they re-act. Here it is their proper effect not to destroy, but to build up; not to paralyze, but to invigorate; not to sow division, but to strengthen union. They are the life-blood, which flows to and from the heart through the veins and arteries of our political system; and their circulation constitutes its vitality. The intellectual and moral being is here reared from the cradle in the undisturbed possession of all the advantages, and continues through life susceptible to all the influences which they are suited to impart. It is for us to contemplate the immeasurable usefulness, of which, by his circumstances, he is thus rendered capable. It is for us to appreciate the value of those attainments, which referring rather to his nature and destiny than to his present condition, can perish only with the mind that possesses them.

In connexion with this topic I may briefly state, that effects, which mocked the skill, and tortured the ambition of former times, are already visible, and are seen to have been produced by a change of means, which strongly illustrates the view that I have taken. It was the vain boast of Archimedes, that if he had a station on which to rest his lever, he could move the world. Our country is the station, from which the world has been already moved by a moral power unknown to Archimedes. It was the vain regret of Alexander, at the height of

earthly dominion, that there were no more worlds to conquer. In our age, Science has extended its conquests to other worlds.

To what nobler purpose can the Lyceum be devoted, or to what is it more strikingly adapted, than to the cultivation of intellectual and moral excellence? While it excites the individual to a consciousness of his powers, while it interweaves its influence with all the interests of society, while it exemplifies the benefits of our political institutions, let it never be its reproach, that the great object, for which life, in any of its relations, is to be valued, or for which knowledge, in any of its departments, is to be sought, has been neglected or forgotten.

I have thus undertaken to represent the present age as the period, and this country as the theatre of the proudest triumphs of human improvement. Moral courage is never disheartened by difficulties and dangers, so long as the mind's eye can discover satisfactory and practicable results. I have endeavored to exhibit such as are or may be successfully accomplished; and the purpose of the lecture will be answered, if you have been led to perceive, that in the accomplishment of these results, the Lyceum may be rendered an useful instrument.

The country in which we live is described in geography as the first settlement of a new world. The unprejudiced stranger, who has crossed the Atlantic, whether he approaches the rocky ramparts of the eastern coast, or pursues the chain of the northern lakes, or roams through the solitudes of the western wilderness, or threads his devious track amidst southern savannas—whether his heart shudders at the horrors of the wintry tempest, or his ear is stunned by the roar of the cataract, or his eye reposes on a boundless forest, or all his senses are regaled by the beauty, fragrance and melody of a luxuriant plantation—whether he treads with a more than classic reverence the rock of Plymouth, or climbs with the zeal of a naturalist the cliffs of the Alleghany, or explores in the canoe of the Indian the scattered sources of the Missouri, or glides in the steam-boat of Fulton over the smooth surface of the Ohio, finds himself in a region abounding with works of nature of

unsurpassed magnificence and sublimity. He finds himself, too, amongst a people, whose origin and progress are characterized by a moral grandeur worthy of their natural advantages. He reads their history with the enthusiasm with which he surveys their territory. In the character of the Puritan fathers of New England, he traces the same rude features of strength and endurance that are impressed upon her iron-bound shores, her craggy mountains, and her stubborn soil. In the early fortunes of Virginia, in the triumphant struggle of her adventurous founder with difficulties deemed insurmountable, he is reminded of that "stupendous scene," where the impetuous Shenandoah suddenly bursts the barrier of the Blue Ridge, and sweeps away in a moment the obstacles which had for centuries impeded its passage to the ocean. In the school of Virginia statesmen he reads the lessons of profound and practical wisdom, alike quick-sighted to discern an infraction of the people's rights, and to devise a remedy for their wrongs, which guided the pen that drafted the Declaration of Independence, and wielded the sword that was sacredly devoted to liberty. He repairs to Mount Vernon to contemplate the visible relics of the pure taste, the virtuous ambition and the happy old age of Washington; and though he is there pointed to his grave, he still feels his presence in the simple majesty, the mellow ripeness, and the softened harmony of all which surrounds him. In the clouded dawn, the fearful conflicts, and the mighty issue of the Revolution, he studies the destiny of a people, worthy of the blessings which liberty bestows, and fit to conduct the march of civilization from the Atlantic to the Pacific. Following in the track of the pioneers of the western settlements he recounts with pride the monuments of their perseverance, industry, public spirit and prosperity. He perceives art boldly attempting to rival nature in their canals. He admires the growth and opulence of their transylvanian cities. He discovers the smoke of the steam-engine as far as he can descry the smoke of the log-hut. He finds the farmer only preceding the mechanic, and the mechanic the manufacturer,

and all classes employed in the honorable competition of rendering private industry subservient to the public weal. Throughout this vast country he perceives geographical diversities blended into political union, and local interests promoted by mutual dependence. He inquires the extent of territory, and calculates the increase of population. He notes the varieties of soil and climate, and the profusion of animal, vegetable and mineral productions; and he looks forward to the period, seemingly not far distant, when this republic shall be pre-eminent amongst the nations of the earth.

Such is the scene presented to the eyes of the transient observer. Such are the recorded events imprinted on his memory, and such the associations that cluster in his imagination. If he have the curiosity of a philosopher as well as the enthusiasm of a traveller, he is not content with an external view of the present, or an historical outline of the past. He investigates the causes that have wrought and are producing such wonderful effects. He takes an intimate survey of men and things. He seeks the friendship of individuals, that he may learn from their lips the lessons of experience. He mingles in all the circles of society, that he may trace the clue of its innumerable combinations. He is admitted into the family, where the mother shows her children as her jewels, and where the infant character is formed by parental precept and example. He visits the free school, where education is seated as the faithful nurse by the side of the cradle of liberty. He enters the Lyceum, and is welcomed to the presence of intelligence and virtue. Last of all, he joins the multitude that go to the House of God in company, and there, amidst different modes of worship and instruction, he beholds the all-pervading influence of religion, in its sublime and endearing attributes of holy faith, immortal hope, and heavenly charity.

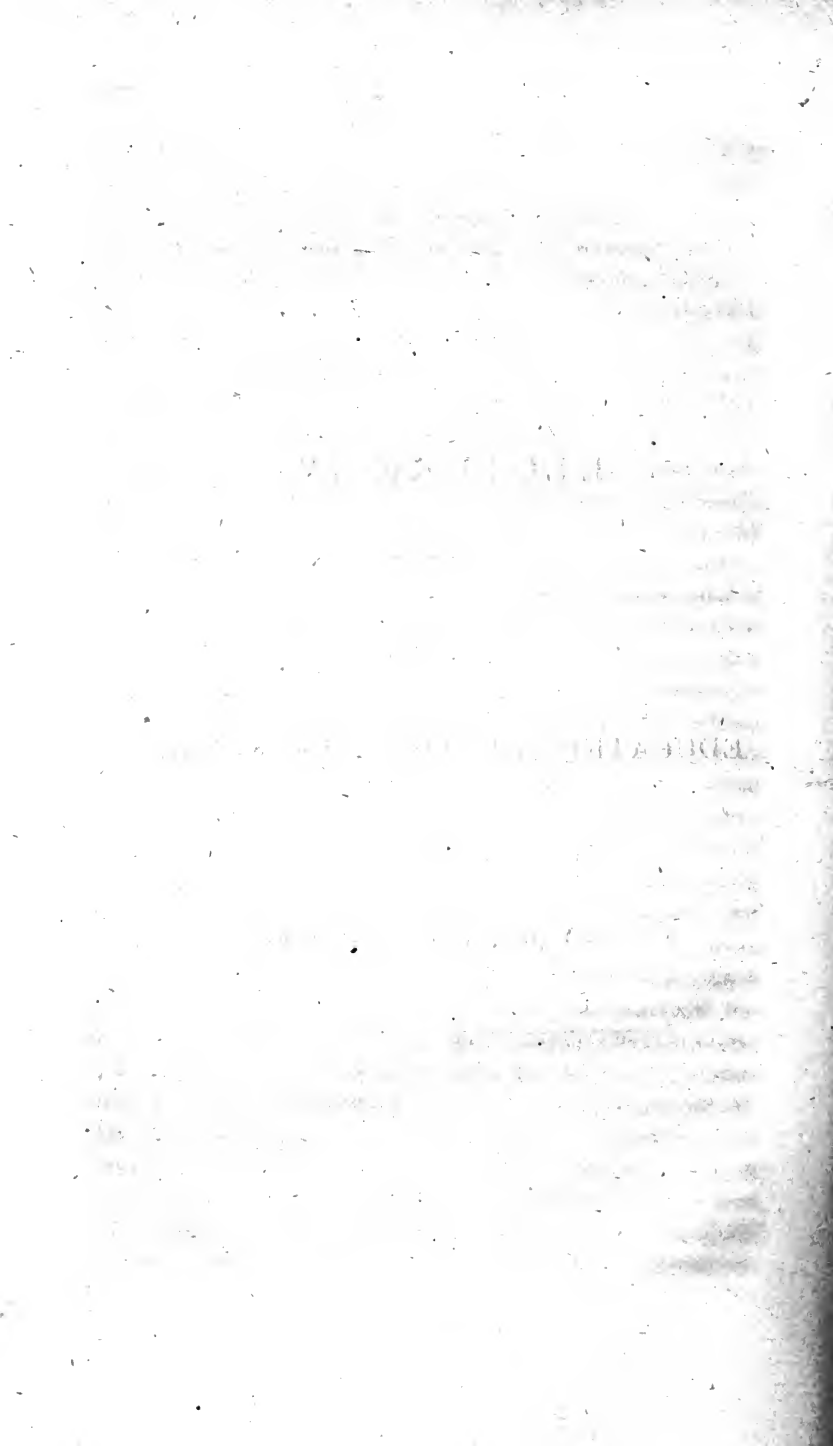
LECTURE IV.

ON THE

EDUCATION OF THE FIVE SENSES

BY

BY WILLIAM H. BROOKS.



EDUCATION OF THE FIVE SENSES.

THE sun is on his way through the heavens, diffusing his mighty influences abroad over the universe : tell us the great purpose of his magnificent mission. A few hours more, and the firmament will glow with the mild and mingled radiance of planet and star : "But wherefore all night long shine these?" Why has the earth, beneath, its profuse variety of surface, with rock and stream, plain, mountain, and valley, in combinations no where the same, but every where interesting ; subject also to the imposing changes of the seasons, and now adorned with so grateful a green, relieved with thousands and thousands of flowers ; and again here with the forest, and there with the harvest ? The myriad substances of the material world are characterized each by its own dimensions, its own hardness or softness, its own asperity or smoothness, from the atom to the mountain, from the obdurate rock to the yielding fluid, from the rough bark of the oak to its polished leaves. Surely there is some good reason for all this diversity. Are not the powerful odors of Eastern spices, the breath of aromatic herbs, and the sweet scents of our own wild flowers floating on the gales of Heaven ? Is not the table of nature now and always spread from pole to pole, with an infinite multitude of luxuries, with the fowls of the air, the fish of the sea, the beasts of the field, and the contributions of the vegetable

kingdom supplying the delicious and abundant fruits scattered from clime to clime? The birds pour forth their heaven-taught notes; the torrent, the tempest, and the ocean roar; and the human voice, with its tones of feeling and intelligence, utters music the divinest of all. But why is all this? Why indeed is the whole creation of God but one majestic assemblage and exhibition of objects of sense—of things appealing to the sight, and the smell, the taste, the hearing, and the touch? Is it not because the great design of the Deity in creating the universe was, so far as we can know, the education of the human soul by means of the bodily senses? This surely can be no disparagement from the dignity of his purposes, for we know of no created thing so precious or so noble as is the soul of man.

It is, then, no unworthy object of desire to know if the senses, those material organs which the Deity has honored by associating them with the immaterial soul, and so curiously wrought them that they can be, and are the great conveyances of knowledge to the mind—if these can be improved by human interference; and if so, how that improvement can be effected. I acknowledge the subtile and difficult nature of this hitherto almost untouched inquiry, in the science of education. Few writers upon the human mind have thought it worth their while to trace the current of the intellect to its source, and to observe the place where springs the sacred fountain and the influences, whether earthly or heavenly, which affect its early course. Scarcely one has entered upon such investigation for the high purposes of education. But to the teacher, who deals with the unformed mind, and presumes to shape the Parian marble, it is an imperative duty to study not only the finished statue, but also practically the block itself, that he may discover its original qualities, and ascertain what is necessary to transform and elevate the shapeless elements into the noblest image of man. And how feebly does a comparison of the teacher with the statuary, represent the obligations of the former. The importance of his making the greatest and best use of every influence he can exert upon that celestial

spirit, which has been placed upon earth in a mortal body, for its education, and is destined to live forever and forever to be affected by his interference, does indeed transcend all human calculation, and runs beyond time far, far into eternity.

What then is the mind before its earliest sensation, before it holds its first beautiful but mysterious communion with inward wants, or with external nature? The senses, acting as interpreters between the material universe and the ethereal spirit, have not yet begun to dispense to the soul that divine knowledge, which is its life and its growth, and which is naturally destined to cease to be dispensed to it only at death, when that soul has already improved, or failed for ever to improve, its opportunities of receiving all the light and strength from the material world which that world can afford. What is the mind before this celestial machinery of sensation is first set in motion? We might almost say it is nothing,—the intellectual gem is in the ore and in the mine: it is what Adam was before the Almighty breathed into his poor form of clay the awakening breath of life. The faculties of the mind are yet inanimate; the soul is still and dormant, and its deep sleep cannot be broken but by the talismanic power of a sensation. It is like the creation. "The earth is without form and void; darkness is upon the face of the deep;" but "the Spirit of God is moving upon the face of the waters;" and can alone effectually say, "Let there be light."

A sensation is experienced, and the mind is now roused to action, and begins from a material impulse a spiritual career, destined to be eternal. The pure and undisciplined eye, which will in after life make the mind "creation's lord," and will look upon so many sights of happiness and misery, now dawns upon a mother's blessed smile, upon the kind countenances of relatives and friends, upon the infinite variety of the works of nature and of art. All is new, all interesting, to a degree absorbing beyond our conception as much as beyond our memory. The hand of the infant is raised to what the eye perceives; the eye turns to what the hand inadvertently

touches ; and the taste, being one of the earliest senses that is gratified, the object is soon brought to its perception. The smell also provokes or prevents the taste, and all the senses are thus connected together in their operations upon the mind, for the valuable purpose of corroborating or correcting each other, as will hereafter be made to appear. Thus the senses are quickly in full and gratified action, and, like bees in spring, incessantly returning to the hive with fresh stores of sweetness, they impart to the mind continually their varied impressions, full of beauty and novelty, so that the soul is engaged in rapid succession in ten thousand acts of fond and admiring observation. Pleasure succeeds to pleasure, and wonder to wonder, while the mind, so soon to be master and disposer of senses and sensations, and of its own operations, is now lost and insensible to its own motions, amidst the numerous and variegated scenes exhibited before it, in the great theatre into which it has been introduced.

By and by something striking is presented for the second time or the third, and probably it may be still oftener before the infant intellect recognizes it as the same. But whenever it once recognizes an object, then it puts forth for the first time the faculty of memory. Memory begins her holy office, and the child becomes more the image of God in gaining something like one of his attributes—knowledge of the past as well as the present. The child takes a second step in mastering this precious faculty, when upon a repeated perception of an object he not only recognizes that object, but has suggested by it another, previously, but not now associated with it. He sees something belonging to his sweet smiling mother ; and though she be no longer there, her affectionate look again gladdens his thoughts. Another victory over the memory is necessary to the mind before it has that faculty entirely productive ; it is to have past perceptions or conceptions suggested by past perceptions, without the intervention of sensible objects. But such an exertion of mental power evidently belongs to a riper age than that now under consideration. It fully appears, then, that all the early

acts of the memory spring from sensation—the memory, that noble and capacious faculty of the soul—the storehouse of our experiences, which guide us in our conduct, and of the materials which reflection converts into knowledge.

At a very early age, even before the child begins to observe things very closely, he will unconsciously make a comparison among objects before him, and turn decidedly to the most striking. The strongest light, the sharpest sound attract his notice. This is discrimination; these are the incipient efforts of the judgment. After a time, he will measure with his hand, or his eye corrected by his hand, the sizes and distances of objects, or compare with his taste or smell this sweetness or fragrance with that. He has now in active use the faculty of judgment, and long indeed must he exercise it upon perceptions before he can apply it to abstract thoughts, or even trace or know any thing of the movements of his own mind.

Somewhat later, when the young mind begins to unite the various infant experiences it has treasured up in the memory, perhaps when the child recognizes a friendly countenance, and out of his past simple pleasures schemes a new one, then he is exerting his imagination. Soon he will learn to weave assiduously a broad web of his past impressions, to pourtray to himself a picture of the future, whether with the bright lights of hope or the gloomy shades of fear, or with both in mingled relief. With how many fond but false expectations does the imagination, built upon erroneous perceptions, elate us; with how many dark but unreal forebodings depress us! Based upon accurate and full observations, it lights up the eye of the artist, the poet, and the orator, with their noblest conceptions, but otherwise cheats them with tinsel promises, and leaves them to lament the baseless fabrics of their visions. But let us reflect that the earliest, and for a long period the only exercise of this faculty, must be upon thoughts relative to objects of sense, or the immediate results of sensation alone.

The mind is at first completely subject to the influence of out-

ward objects; and even for a considerable length of time bestows only a passive notice upon them; conscious of, in fact, having no power to attend to one thing alone, and exclude others simply because it is desirous of so doing. Whenever it does acquire this power, it must evidently exercise it upon a multitude of sensible objects, and give it a protracted training upon them, before it can gain the more subtile faculty of attending voluntarily to its ideas of reflection.

We have traced the leading faculties of the mind to their original efforts. What then is the issue? That all of them, the memory, the judgment, the imagination, the attention, all spring into action by the influence of impressions upon the senses, and all are for a long period employed solely upon those impressions conveyed to the mind. The senses are the nursing mothers of the mental powers. In fact, for many years, and in most persons during all their lives, those faculties are chiefly employed upon such materials as the senses furnish to the mind. How then can the teacher be addressed too earnestly upon the importance of the senses to the mind, and upon the necessity of educating them to activity and accuracy, if indeed they can be educated, since their sluggishness and inaccuracy can give but little employment to the original intellectual faculties, and that little fitted to pervert them. When we read the hallowed pages of Milton, and feel our souls elevated within us as we walk in the paradise of his imagination; while we give ourselves up to conviction as we follow the clear course of the honest, acute and strong judgment of Locke; when we reflect upon that illustrious appeal for the union of these states, which subdued a senate and enlightened a nation; when we think that these immortal efforts of the human mind were produced by a memory, a judgment, an imagination and a power of voluntary attention, which for years were exerted upon sensible objects alone, and *thus* laid the foundation of their power, we shall not easily admit that it is of small moment whether the senses be educated or not; whether they actively

send into the mind true and lively images, or sluggishly impart dull and inaccurate impressions.

Is then that noblest of telescopes, the actual model of the best glasses, the human eye, capable of giving better perceptions to the mind by means of education? Is this, are our other senses susceptible of improvement by human effort? Or has the Deity made us responsible for the improvement of all our other talents and not of these? The contrary may be conjectured from the analogy of the other parts of the body; it may be inferred from the nature and operations of the senses, and it can be absolutely proved by experience.

The hand must be educated to its exercises before it can perform them well. It must gain strength and power of application by several years' training; the difference between the right hand and left shows, though inadequately, the natural, undisciplined condition of the hand. Even when well brought up, the hand must still be educated to each separate accomplishment, as writing or playing upon the piano. So it is with the arm; the blacksmith's arm is muscular. So it is with the foot and lower extremities; long practice in dancing lends ease and gracefulness to the step.

The nature and operations of the senses imply their susceptibility of improvement. When we wish to observe an object at some moderate distance, we receive the rays of light from that object into the pupils of both eyes. The two lines of light make a certain angle or opening at leaving the object, that angle being smaller as the distance is greater.* Having made a muscular effort, and observed the size of the angle made by the lines of light, and having measured by the sense of touch, or discovered in any other way the actual distance of the object, we come at last, after much experience, to compute that distance by the degree of exertion to which we put the muscles. To see things very near, we voluntarily adjust the eye. When we thus use a muscular effort to suit the eye to the dis-

* Bostock.

tance, we cause a sensation by it, which is conveyed to the mind at the same time that the picture of the object is presented to it. Now by ascertaining the actual distance in repeated instances, by the touch or otherwise, and comparing it with the muscular effort, we soon learn to judge of the nearness or remoteness of objects by the muscular efforts alone. We have other means of estimating distances in the vividness of the light coming from them to the eye, and in the number of intervening objects. Seeing an object very indistinctly, or with a great number of others between it and us, other circumstances being out of the case, we conclude that the object is remote.* But it must require long and careful practice to be able to make accurate estimates in this way. Are not then the senses susceptible of improvement? If we judge of distances by the angle formed by the rays of light coming to us from the object, by the muscular effort we make to adapt our sight to various degrees of nearness, or by the distinctness with which we see it, or by the number of intervening objects, shall we not evidently improve our senses by exercise? Vision also needs education and is susceptible of improvement in observing the motion of bodies, for we estimate the actual motion by that pictured upon the retina or back part of the eye, and by the various sizes of the image.† But we need practice to make us adepts in judging of the true from the represented change of place. So with the ear; we judge of distance by the intensity or weakness of sounds, pronouncing this body to be near, and that remote, because the sound from the first is full, from the second faint.‡ To be sure, we are not generally very accurate in our estimate of distances by the ear; but if we had our sense of hearing well trained, we should without doubt find it a better servant. To judge in what direction sound comes to us, we make both ears answer their purpose by a comparison of the intensity of the two sensations, and by thus forming a judgment of the place from which the sound proceeds. But we must make

* Bostock. † Magendie. ‡ Magendie.

many and many a trial before our judgments will be accurate. Still it may, after all, be said that we get immediate information of the distances of objects from the sensation; that it is natural for us to see or hear the distance of things simultaneously with the color or sound, and without the intervention of the judgment, and without any such training of the sight and hearing, or such habituating of the mind to comparisons. But it is well known that infants cannot judge of distances, and do not see them, because they grasp at things far beyond their reach, as much as those within it, not having learned to measure distances by the eye. And any person accustomed to estimating distances, a surveyor for example, can judge of them with much more precision than another, without his experience. But the question was long ago settled by Cheselden's valuable observations on the blind youth whom he restored to sight. As the account is rarely to be met with, and is pertinent to the subject of this lecture, I will quote from it freely.

This youth was born blind, or lost his sight so early that he had no remembrance of ever having seen, and was couched, when he was between thirteen and fourteen years of age, by Mr. W. Cheselden.

"The young man could before distinguish a good light, black, white and scarlet, but could not distinguish the shape of any thing, and knew so little of the colors mentioned, that he did not recognize them on gaining his sight, and did not think them the same he had before known by those names.—When he first saw, he was so far from making any judgment about distances, that he thought all objects whatever "touched his eyes," as what he felt did his skin; and thought no objects so agreeable as those which were smooth and regular, though he could form no judgment of their shape, nor guess what it was in any object that was pleasing to him. He knew not the shape of any thing, nor any one thing from another. But upon being told what things were, whose form he before knew from feeling, he would carefully observe, that he might know them again. But having too many objects to learn at

once, he forgot many of them. Having often forgot which was the cat and which the dog, he was ashamed to ask ; but catching the cat (which he knew by feeling), he was observed to look at her steadfastly, and then setting her down, said, so, Puss ! I shall know you another time. About two months after he was couched, he discovered at once that pictures represented solid bodies, when to that time he considered them only as party-colored planes or surfaces, diversified with variety of paint ; but even then he was no less surprised, expecting the pictures would feel like the things they represented, and was amazed when he found those parts which, by their light and shadow appeared now round and uneven, felt only flat like the rest ; and asked which was the lying sense, Feeling or Seeing. Being shown his father's picture in a locket, and told what it was, he acknowledged a likeness, but was vastly surprised ; asking how it could be that a large face could be expressed in so little room, saying it should have seemed as impossible to him, as to put a bushel of any thing into a pint. At first, he could bear but very little sight, and the things he saw he thought extremely large ; but upon seeing things larger, those first seen he conceived less, never being able to imagine any lines beyond the bounds he saw ; the room he was in, he said he knew to be but part of the house, yet he could not conceive that the whole could look bigger. A year after first seeing, being carried upon Epsom Downs, and observing a large prospect, he was exceedingly delighted with it, and called it a new kind of seeing. And now being lately couched of his other eye, he says, that objects at first appeared large to this eye, but not so large as they did at first to the other ; and looking upon the same object with both eyes, he thought it looked about twice as large as with the first couched eye only, but not double that we can any way discover." * We see clearly from this narrative, that impressions on the organ of sight give us originally no idea of the distance or shape of objects,

* Philosophical Transactions, vol. 7. pp. 491. et seq.

and that we are able to judge of figure and remoteness now only from such education of our vision as has been described. We see, too, in general, how much time and pains it cost this youth to learn to see even with the advantage of a mind already developed. It seems to me, then, that the nature and operations of the senses fully imply, that they are susceptible of, and do actually receive, improvement by cultivation.

But this important question is positively decided by experience. Physiologists, who have carefully examined the physical nature of man, and probably the observation of most of us, bear full and explicit testimony to this point. Magendie says, "By the exercise of the sense of touch it may be brought to a very great degree of perfection, as is often observed in many professions." "We know from numerous observations, that the vivacity of the impressions received by the senses, is increased by the loss of one of those organs. For example, the smell is more delicate in blind or deaf persons, than in those who enjoy all their senses." The deaf, dumb, and blind girl, in the Asylum at Hartford, from whose unfortunate mind knowledge is at two principal entrances "quite shut out," has an exquisite sense of touch, sews very well, recognizes by the touch those persons of whom she is fond, and those whom she dislikes, and easily selects her own ten-cent piece from a handful of change. Now it is not to be supposed that the blind, who almost always have a nicer sense of touch than people generally have, in just such proportion of numbers as there are blind people, are possessed of this superiority by birth; but they depend upon the sense so much that they use it more, and attend to its sensations more carefully. Sailors can see further, and Indians can hear a greater distance than persons generally can, because they find it necessary to exert their faculties of sight, and hearing so much more and with so much greater attention. The epicure can distinguish by the smell and taste flavors so subtile, that plain eaters would be entirely insensible of them. We all know, too, how much the musical ear is susceptible of improvement by education. Does not experience abundant-

ly and unanswerably prove, that the senses may be educated to activity and accuracy?

By a survey, then, of the analogy of other parts of our system, and of the nature and operations of the senses themselves, and lastly by our own copious experience, we arrive at the same great and cheering result. We know that the senses can be made to send larger and better streams of knowledge to the soul by the influences of education. How then can they best be educated; how brought to their most efficient condition? Exercise them, exercising simultaneously the powers of the mind. Exercise is the very spirit of all education. It is the means of all improvement of the body, the understanding, and the feelings. Employ the mind then, actively upon sensations. The faculties of seeing and hearing, of the touch, smell, and taste, belong to the soul as well as the body. The painting upon the retina of the eye does little more towards seeing than does the image in the mirror. The eye does not see the landscape of itself, but the mind sees it through the eye. It were absurd to expect the hand to learn to write by tracing a million times the shape of the letters without the supervision of the mind. It is evident, then, that the senses can be improved only through the co-operation of the mind. If therefore any one should say that all that can be done is to improve perception, the act of the mind—and not sensation, the function of the senses, and therefore there is no such thing as educating the senses, we are prepared to perceive the futility of the objection. The action of the mind, called perception, is a part of the process of seeing. Not that it is necessary to admit that the material organ itself is incapable of improvement by education, for the analogy of the other parts of our system imply the contrary, and undoubtedly use gives a greater command of the muscles exerted in sensation; but still the exercise of the sense of sight would enable us to see better, although the physical part gained no amendment. For when we wish to observe an object fully and accurately, we make a close and vigorous effort of the mind, and are ready to make a perception

of every part of the sensation. Now by a habit of such close observation, long continued, the Indian hears a footstep at a distance at which the white man hears nothing, and the sailor descries in the horizon a sail which is beyond our sight; and they have made an improvement upon the original power and acuteness of their senses just as much, if the sensation always has been the same; but the mind has become more keen in detecting the smallest parts and points of the impression, as if the sensation now presents a more minute and distinct representation of the object to the mind. We do certainly improve our senses by exercise in one of these ways, and this result is enough to satisfy us.

The training of the senses to activity and accuracy is the earliest part of the education of the individual. The infant, a delicate and helpless stranger among its fellow beings and among the works of God, soon begins to manifest his desire of a more familiar acquaintance with all around him. But little more can be done to improve his senses, which are his means of information, than by putting objects in their way to give them employment, that they may be saved from sluggishness, and to let him or stimulate him to observe objects fully, not hastily and imperfectly. If he please, let him bring the same objects to the concurrent observation of several senses. Let him correct his sight by his touch, his hearing by sight, his smell by taste; and all this he will do of his own accord, if we only do not continually break up his processes of thought by taking him away from the objects of his busy investigation. His thoughts are at work upon his sensations, and the degree of attention he now bestows upon objects of sense, and the accuracy with which he inspects them, are incalculably important, for he is laying the foundations of his mind.

In the succeeding periods of childhood and youth we can interfere much more in increasing the acuteness and power of the senses. We can discipline the sight directly, and to a great extent, and we can have the satisfaction of perceiving the progressive improvement of the faculty. The child may be led

to observe the lengths of pieces of wood, and to make an estimate of them ; and may afterwards be permitted to measure them, and discover the degree of accuracy in his decision. The length, breadth and height of rooms, of houses and churches, the distances of remote objects, may exercise his sight and his judgment to a very great extent. Whenever it is convenient, let him compare his estimate with the actual measurement ; this will lend a permanent interest to the exercise. For he will want the satisfaction of knowing how near he came to the truth, and will be more careful in future that he may be more accurate, and afterwards he will be encouraged by becoming so. He may also be taught to discriminate the varieties of green in leaves and other things, of yellow and red and blue in flowers and paints, and to distinguish not only the shades of all the colors, but their respective proportions in mixtures of two or more. Let him be encouraged to notice and point out separately the various parts of pieces of furniture and their uses, of a chaise or coach, or other vehicle, and watch their movement and their purpose. Drawing is an excellent exercise, whether of maps, of the shape of objects, or of landscapes. Let him survey carefully and describe the prominent points of a landscape, the elevations and depressions, the mowing, pasture, wood and tillage land, the trees, the houses, and the streams. Listen to his accounts of his plays, of his walks, of his journeys, and of any event of which he may have been a witness. In all these exercises of his sight teach him to be accurate, and whenever it is practicable, let the judgment he pronounces, and the descriptions he gives, be corrected by the truth. The pupil will inevitably be interested, and if he have been a careless and inaccurate observer, will soon become more watchful and exact.

Let him exercise the sense of touch blindfold, comparing the relative hardness and softness of different solid bodies and the density of fluids, the weight also, and the dimensions of length, breadth and thickness of the same solids. Let him learn to estimate lengths also by passing his hand over objects

with different degrees of rapidity ; let him determine also fineness of texture in cloth, of grain in wood or stone, and after deciding, correct himself by looking at the substances. Again, he may judge of the temperature of liquids, and when it is possible, correct his judgment by a thermometer. The pupil may also learn to write and to draw various figures without the help of his sight, and distinguish coins and all kinds of substances from each other.* The scope of his exercise of this sense may in this way be unbounded.

The ear may receive its discipline in distinguishing, without direction from the eye, the causes of each noise that is made, as that of writing, moving a chair or a table, and in telling the kind of article drawn upon the floor or elsewhere, as wood, or stone, or paper ; with what a blow was given, with the hand, a stick, a hammer or a stone, and what received the blow. Determining all the different musical tones and detecting the counterfeit voices of his companions, will involve great efforts at discrimination, and great exercise of the sense of hearing, as will also the judging of the distances and directions from which sounds proceed.

The smell without the aid of the eye may distinguish the rose, the lily and the pink, and the untold variety of fragrant plants and flowers, and may decide between different kinds of food, aromatic drugs and other odorous substances.

The taste may be disciplined by discriminating between the profuse diversity of fruits, of liquids and of food, without assistance from the other senses. Additional exercise for the taste may be found in distinguishing many kinds of roots and plants and wood and metals.

Such are some of the direct means of improving the senses ; and they are probably susceptible of great variation and extension, and numerous combinations ; let us pass to others, more indirect it may be, but still more important. If the Deity have created the universe partly or wholly for the education of the

* See Parent's Friend.

human soul, he has completed his plan by giving to the soul the senses to act as its instruments in receiving that education. Accordingly the various sciences which are and have long been used for developing the intellectual powers, are based upon the intercourse which the mind through the senses holds with the material universe. Geography surveys the great natural and social divisions of the globe; astronomy looks upward to the march and array of the heavenly host; arithmetic first counts the sensible objects about us, and mathematics dwells upon their motions and their forms; grammar and rhetoric make the science of language, and language depends upon the ear; and chemistry, mineralogy and natural history all rest upon observation. All these sciences, founded upon the action of the senses, can be understood only through the senses. Books serve to tell and explain what great study and genius have learned. But the only way in which a science can be practically and well understood, is that of mingling with the study, of books a sufficient leaven of original observation, and experience to imbue the whole with life. We deal too much in abstractions in our schools, both for young and old. The senses are not sufficiently used; yet theirs is the evidence most satisfactory to boys' minds as well as ours. In astronomy, the boy studies a treatise, and, as the word goes, *learns* it. But he does not learn it, that is, he gets no practical knowledge, and comparatively little useful discipline. Let him use his eyes. Let his first lesson be in the open volume of the skies. Let him watch the order and motions of the heavenly bodies, and learn the planets and chief constellations. In studying geometry, let him, construct figures; in surveying, let him survey; in geography, let him examine the country around him, making his observations the foundation and standard of comparison for his future studies, and let him delineate every place of which he is learning an account. Follow the same principle in other sciences. What mechanic would think himself preparing his apprentice for usefulness, by giving him books to read about his trade, and some lectures upon the subject, without

letting him work at his business. The apprentice and the student both want the practice as well as the theory, and the practice rather than the theory. How stiff and cramped a thing is a mere book-education! As learning once secluded itself in the monasteries, so now, not always, but too generally, it retires into the school-house eschewing the senses, its natural and most thorough means of education, and grows mystified and confused with poring over abstract ideas alone.

Let the pupil be educated to watchfulness and attention to his sensations in school. Let him not be dull in hearing and seeing, but rouse him by making his studies and recitations interesting by sensible illustrations. Let him not be fickle in attention, but strengthen that faculty by judicious discipline of the senses, till he have acquired the command of it even in studies entirely abstract.

We have seen that sensation awakes the soul from its original sleep, that the great creation is evidently designed to educate the soul and the soul is fitted to be educated by it, that all the intellectual powers are at first and for a long time solely employed upon impressions upon the organs of sense, that all sciences and branches of education are grounded upon observation and can be understood only by means of observation. We know that the accuracy and activity of all business, that skill in every art and mechanical pursuit, that the correctness and life of most literary and scientific description and illustration, all greatly depend upon the state of improvement to which the senses have been trained. To strengthen and sharpen the senses is to give vigor and keenness to the mind. And throughout human existence, whether it be when the lively child is attentive only to feeling and the works of nature, or when he has become an adult, and mingles reflection with observation, or when the man has lost the acuteness and power of his bodily organs in advanced age and lives only in memory and meditation, or even when he has been removed from the world of sense to the world of spirits, at all times

and in all situations, the character and condition of the individual must be decisively influenced for good or for evil by the intercourse he has held through his senses with external nature.

LECTURE V.

ON THE

MEANS WHICH MAY BE EMPLOYED

TO

STIMULATE THE STUDENT

WITHOUT THE AID OF EMULATION.

BY JOHN L. PARKHURST.

LECTURE V.

ON THE

RELATIONS OF THE MIND TO THE BODY

AND THE NATURE OF THE SENSATIONS

OF THE HUMAN MIND

BY J. H. WATSON, M.D.

MOTIVES TO STUDY, WITHOUT THE AID OF EMULATION.

IT has been the practice of most teachers, to call in the aid of *emulation* to stimulate their pupils in the prosecution of their studies. By several writers, however, it has been maintained, that this is not a good or a safe principle of action. And many teachers, who resort to it, acknowledge its tendency to be dangerous, but justify themselves on the ground of necessity. They suppose it to be impossible to find other motives sufficiently powerful to produce the desired effect. The attention of my respected audience is now invited to a few remarks on "the means which may be employed to stimulate the student without the aid of emulation."* If such means can be

* It will be seen, that the shape of the subject, assigned by the Directors of the Institute, precluded the writer from entering into a consideration of the lawfulness or unlawfulness of emulation as a principle of action. In the discussion which followed the delivery of the lecture, however, he was led to regret, that he had not at least attempted a *definition* of emulation, and made a few plain *distinctions* in order to guard, if possible, against that confusion of terms, and ideas too, by which the discussion was embarrassed. Indeed, without a clear idea of what emulation is, it would not appear but that the lecturer in attempting to enumerate the best means of stimulating a student without the aid of emulation, had inadvertently recommended some methods, which have a direct tendency to excite those feelings in which emulation consists. Is emulation, then, as has been sometimes insinuated, a desire for advancement in knowledge and virtue? a desire of continued and indefinite progress in literature and science, and in the culture of the intellectual faculties? If so, the lecturer has entirely mistaken his sub

pointed out, a favor will be conferred on those who regard emulation as an unlawful or an unsafe principle of action ; while even they who have no scruples on that point, may find the influence of other motives a desirable auxiliary in the work of education. The importance of the subject assigned me on this occasion, is readily perceived, when we consider, how general is the practice of resorting to the aid of emulation, in families, in common schools, and in literary institutions of a higher order ; how powerful this principle is in its operation ; and how great and lasting an influence it frequently has in the formation of human character. To do full justice to our subject, would require an elaborate treatise on the principles of education. On the present occasion, being restricted, by feeble health, within narrow limits, I can only offer a few suggestions, without stopping to illustrate my meaning by examples, to prove the correctness of my views by facts and arguments, or to trace my principles to their various practical results.

1. The human mind is formed for activity. It is so constituted that the voluntary exercise of its various faculties on

ject, and has relied for success in stimulating a student, chiefly on that very principle which he professed to avoid. But he understood emulation and he still believes it is generally understood,—to be quite a different thing. *Emulation*,—as he understood the term,—is a love of *superiority*, a spirit of *competition* or *rivalry*, a desire to *outdo others*. It is altogether a *comparative* thing, and derives its whole gratification from a *comparison* of one's self with another, or some others, who are regarded as inferior, or as having been left behind in the race. It is a *selfish* principle, and utterly inconsistent with disinterested benevolence. One who is actuated by better motives, might say to his fellow : "I have a desire to press forward in the path of improvement and usefulness, I am determined to use every effort for the purpose. I should rejoice to see you do the same. Come, then, and go with me. We may each be a help to the other. It will give me pleasure to aid your progress by every means in my power. But if you remit your efforts, I must condemn your negligence. If you fail for the want of opportunity or ability, I shall lament your misfortune. Surely, I cannot wish to see you linger behind. I should be base, indeed, to derive pleasure, from seeing another destitute of a good which I myself enjoy." For a more extended discussion of this subject, see the chapter on "*Emulation and Ambition*" in "*Elements of Moral Philosophy*," by the writer of the Lecture.

appropriate objects, is a source of pleasure. But there are several ways in which the mind, especially of a child, may become fatigued, or wearied, or disgusted. Mental exertion may be too long continued. The mind may be too long confined to a single object. Exercise may be afforded to only one of the faculties, the memory for instance, while the other faculties, more important in their nature, and more interesting to the possessor, are suffered to lie dormant. The mind may be compelled, or reluctantly urged, to direct its attention to a specified object, at a moment when it happens to have a strong preference for some other employment; or it may be required to attend to something, to which it has imbibed an aversion in consequence of injudicious treatment or unfortunate associations of ideas. The pleasure naturally arising from intellectual effort, may also be destroyed by keeping the body too long confined to the same posture. The intimate connexion and mutual influence of body and mind are well known. The body is formed for activity, as well as the mind. If, for want of exercise, or from a confined posture, the blood does not circulate freely and all the vital functions go on briskly, the intellectual operations will be impeded. When the bones begin to ache, or the blood to stagnate, the mind becomes dull, and that which otherwise would be very interesting, now loses its power to charm. Let, then, the parent or teacher carefully guard against all these counteracting influences, and he will find that the pupil will voluntarily, and with pleasure, exercise his mental faculties and his bodily senses on such subjects and such objects as are suited to his age and capacity.

But what are the subjects, and what are the objects, to which the attention of the mind should be invited? In the case of children, we may infer the design of nature, and may learn what is best suited to their capacity, by observing to what they, of their own accord, chiefly direct their attention and curiosity. It is to the colors, forms, and other sensible properties, together with the names and uses, of material objects. Now, it is the part of a wise teacher, to follow nature; to make the inquisi-

tiveness of children the means of their improvement; and to gratify, encourage, and guide their curiosity, by giving them information, and assisting them to distinguish and describe the colors, forms, uses, &c. of the objects around them. Here is a wide field for inquiry and instruction. The various works of art, and the multiform productions of nature, animal, vegetable, and mineral, lie open to inspection. But even here a selection must be made, and only those facts and operations must be presented to the mind, which it is capable of comprehending. And caution must be used, not to present too many new objects and new ideas in rapid succession. This distracts the mind, produces confusion of thought; precludes a careful observation of the properties, the difference, and resemblances of individual objects; and of course prevents any thing valuable from being treasured up in the memory. In such circumstances, the mind makes a desperate effort to grasp every thing, and fails to secure any thing. The disappointment is painful, and disgust and aversion are liable to ensue. The same caution is necessary in teaching children or beginners any branch of learning whatever. An aversion to being taught is frequently imbibed while learning the alphabet. But this probably arises, in most instances, from the circumstance, that so many new characters, of various forms, are presented to the eye in such rapid succession, that the child, finding it impossible to distinguish and remember them, gives over the attempt in despair, and becomes listless, inattentive, and averse to the task. If the letters were presented one at a time, and each rendered familiar before a new one was introduced, they would be learned with ease and with pleasure. Geometrical lines, surfaces, and solids, are, however, better adapted to the faculties of a young child, as being, in their forms, more regular, and less complicated, than the alphabetic characters.

I have dwelt chiefly on the kind of instruction suitable for children, because it requires more skill to teach them, than to teach older students, and because, if a fondness for learning is imbibed in childhood, and correct intellectual habits are then

formed, the grand point is gained;—the future improvement of the pupil is almost secure;—that fondness and those habits can seldom fail to remain, to stimulate and guide the researches of future years. That the intellectual and moral character is frequently determined by early impressions, is a remark, trite indeed, but so important, that it ought to be repeated, again and again, in the ears of every parent and guardian, and teacher of the rising generation.

Have I digressed from my subject? I think not—at least, not far. The result to which we come is, that a most powerful means of stimulating the student, is, *to teach him in a judicious and skilful manner*. Do this, and avoid all counteracting influences, and he will *love to learn*. The exercise of the faculties, and the acquisition of new ideas, are both, naturally, sources of pleasure to the mind. This pleasure, once tasted, will be again desired. This desire, which gains strength by fruition, is a stimulus, pure in its nature, safe in its operation, salutary in its influence, and powerful in its effects.

But there are many teachers who do not afford their pupils a proper *opportunity* to exert their faculties. Instead of setting their pupils to *thinking* and *investigating*, they, as far as possible, do all the thinking for them; thus making them almost entirely *passive* in the acquisition of ideas. The teacher who wishes to stimulate his pupils to the highest degree of exertion, should guard against this course. He should never do for his pupils what they can do for themselves. He should never tell them a thing which they can find out for themselves. And when they must be assisted, he should afford them only so much assistance that they can do the *rest* themselves. In a word, he should, as far as possible, in all the branches, pursue that *inductive method* which, we hope, will effect a greater advance in the intellectual improvement of the rising generation, than can be effected by any other cause.

2. In connexion with the preceding remarks, we would recommend to aim at variety and novelty in the objects which are presented to the attention of the student. This is peculiar-

ly necessary in the care of children. One great reason why they soon become weary with reading or committing words and sentences which they do not understand, is, that the charm of novelty is wanting. No food being afforded to the mind, the lesson consists merely of a succession of unmeaning sounds, which fall with dull monotonous sameness on the ear. It is in general advisable, that a student should attend to different branches of study at different hours of the day. When he begins to be weary with application to a single branch of learning, to exchange it for another serves as a relaxation to the mind, and may frequently answer that purpose as well as modes of relaxation of a less profitable nature. Caution must be used, however, as already suggested, against dissipating the mind by directing it to too great a variety of objects in a day. And, it may be added, that seldom, if ever, should two studies, that are entirely new, be commenced at the same time. But not a day, and, if possible, not a lesson, should be suffered to pass, without the acquisition of some ideas, which the learner feels to be new. Too often indeed, the learner is taught in such a way, that he cannot distinguish new ideas from old ones; and too many teachers never think of enabling their pupils to make the distinction.

3. A student is stimulated to exertion by guarding against a wandering mind and keeping the attention directed to the proper object. In order that this may be the case during the time of recitation, the questions should be so managed, that individuals cannot answer, unless their attention be unremitted. This may be done, partly, by expressing questions in such language that they cannot be understood without having attended to the previous questions and answers; partly, when one pupil has failed to answer a question, or has answered it wrong, by calling on another to answer, *without repeating the question*; partly, by analyzing the ideas and making each question and answer as short as possible, so as to pass rapidly round the class; partly, when one pupil has committed an error in some part of his answer or performance, by calling on

another to specify the error and to show why it is an error; and partly, by calling on individuals to answer questions or to correct one another's errors, not in the order in which they stand or sit, but promiscuously. And, minute as the circumstance may appear, the teacher will find it useful, in many cases, to announce a question previously to calling the individual by name, who is desired to answer it. The putting of questions promiscuously, and refusing to repeat a question which has been once distinctly announced, may be made a powerful means of keeping alive the attention of a whole class, or even of a whole school, during an exercise which concerns the whole. It frequently happens, that when one individual of a class is performing his part of an exercise, the others, or some of them, instead of listening to his performance, are studying that question or that part of the task, which seems likely to come to them. Some effectual means must be taken to defeat all calculations of this kind, as it is of the highest importance that every individual in a class should listen attentively to the performance of every other individual.

4. And in order to stimulate them to exertion in preparing for recitation, no one should be able to calculate what part of the exercise he shall be called on to perform. Some teachers always, at a recitation, begin at one end of the class; so that those who stand at that end, know, to a certainty, that the first part of the lesson will come to them, and those who do not stand there, are almost equally certain that it will not come to them. I have even seen a class of little fellows, when paraded in due order on the floor, begin and spell each his word in rotation, and run through a column of the Spelling Book in rapid and unbroken succession, without needing the voice of the teacher or even giving him an opportunity to speak. If one of the band had happened to be *absent*, I suppose *his word* must have been omitted.

5. The inducement to study lessons thoroughly, will be much increased, if each scholar is allowed to *try but once* in spelling a word or answering a question. It is, I fear, a gen-

eral practice, to try twice, when the first attempt proves to be an error ; and some hasty spirits will try three or four times almost in a breath, before the teacher has opportunity to put the question to another, or to advise them to pause and consider what they are saying. This habit of *guessing* is truly a lamentable one. "Think before you speak," is a maxim worthy to be frequently inculcated in school. To a pupil who manifests a propensity to disregard this maxim, the teacher might say, "When I ask you a question, you either know how to answer it, or you do not. If you know, you can, by proper care, answer correctly the first time. If you do not know, then be honest enough to say so, and let some one tell that does know ; for the art of guessing is a branch which I do not teach." To limit each pupil strictly to a single answer, except in special cases, not only affords a stimulus to exertion, but induces a habit of consideration, caution, and correctness in speaking, which is of inestimable value.

6. In all cases where it is practicable, it is best, that questions should be asked in the language of the instructor and answered in that of the pupil, instead of using printed questions, and giving answers verbatim as they have been marked with a pencil. If the pupil does not know precisely what questions will be asked, or in what form they will be put, and finds it necessary to answer more by an exercise of understanding than by an act of memory, he will exert himself to understand the subject ; and by so doing, he will acquire more knowledge, will cultivate his mental faculties in a higher degree, and will become far more deeply interested in his studies, than by pursuing a different course.

7. The various means of stimulating a student, which have been brought into view, are chiefly included in the general idea of a skilful method of teaching. I shall now briefly advert to a few, which are of a somewhat different nature. One of these is derived from the power of *sympathy*. There is, in the human breast, a propensity to feel the same emotions which we see manifested by another on whom our attention

is fixed. Hence, if a child perceives that those who are around him, especially his teacher and parents, take a pleasure in knowing those things which he is learning, his own desire to know them, and his pleasure in learning them, will be greatly increased. This is probably the principal reason, that where we find in parents a taste for reading and literary pursuits, we usually find the same in their children. But when a child knows that his parents and teacher consider learning as an irksome task, and expect him to consider it so, his heart is closed against the sweet influences of knowledge, and he imbibes an antipathy to the very sight or name of a book.

8. Another means of stimulating the student, is the pleasure of meeting the approbation of his teacher, parents, and friends. What pleasure more exquisite, than that of knowing that we give pleasure to others? What sweeter bliss, than that of being beloved by those whom we love? Such is the pleasure which the child enjoys, when he sees the approving smile of his parent or teacher. When he gives an account of what he has learned, or answers questions relative to it; to hear his teacher say, "You have got your lesson well;" or, "I am glad that you understand this lesson so well,"—is a reward, which would compensate him for hours of toil even if the getting of the lesson had been in itself a hard and painful task. How unfit, then, for their office, are those teachers, who listen to the recitations of their pupils with cold indifference, and seldom manifest a lively pleasure in witnessing their improvement! But here much caution must be used, lest a spirit of rivalry should be excited, attended with vanity and pride on the one hand, and with envy and hatred, ill-humor and despondency, on the other. Where several are associated in the same study, it will happen that some will get their lessons much better than others who are equally studious. In such cases, there is much danger of wounding the feelings of the latter by the bestowment of praise on the former. Where it is possible, it is much the best way to praise a whole class at a time. Where this cannot be done, let commendation be sparingly

and cautiously bestowed on those who have distinguished themselves, and let every appearance of harshness, censure, or impatience, be avoided in regard to those whose efforts have been less successful. And whenever these latter individuals happen to get a lesson better than usual ; tell them so, and let them see that you feel a double pleasure in their improvement. Where scholars are indolent, or negligent, or do not try to learn, it is proper to let them know how much pain their conduct gives you ; and perhaps sometimes a gentle reprimand for their waste of time and misimprovement of privileges, may be expedient ; but any degree of harshness, any thing like scolding, driving, or compulsion, so far from making them love learning, will only serve to increase their aversion to it. Whether corporal punishment should ever be used in a school, to deter from the commission of crimes, is a question which it does not belong to me to decide or discuss ; but sure I am, that the rod and the ferule are the worst means that ever were devised, to get knowledge into the head or the love of it into the heart.

9. Another means of stimulating the student, is to *associate* as many *pleasing ideas* as possible with the thought of his lesson, his book, his school, and his teacher. The expectation of being approved and commended, is indeed included in this head ; but there are many *other* pleasing associations, by whose aid flowers may be strewed in the path of learning. A child should always hear an opportunity to learn spoken of as a privilege ; a school, as a pleasant place ; and an instructor, as a friend. Let this be done, and let every school be made indeed a pleasant place, and every instructor show himself a cordial friend to his pupils, and children would soon love their school as well as they do their play. A teacher of a common school should be a person of an affectionate disposition ; one, who loves children, and whose patience and kindness are never exhausted by their ignorance, dullness, and numerous little faults. Yet all the efforts of the most affectionate, skilful, and indefatigable teacher, may avail little, where they

are counteracted by parents and others out of school, who view the subject in a wrong light, and are daily enstamping their false views on the minds of children.

10. Another means of stimulating the student, is to point out to him the connexion between a good education and his future comfort and happiness. On pupils who are old enough to be capable of understanding this connexion, the consideration may be made to bear with great weight. It does not require much discernment or reflection to see, that a cultivated and well-furnished mind is not only a great help in managing one's pecuniary and temporal affairs so as to secure a comfortable subsistence, but adds greatly to a man's respectability and influence as a member of the community.

11. I shall name but one more means of stimulating the student to exertion; and that is, a *sense of duty and of future accountability*. Let the pupil be made to feel, that he owes duties to himself, to his fellow-men, and to his Maker, which he can discharge only by diligence and assiduity in the acquisition of useful knowledge. Let him be made to feel, that if he neglects to do all in his power to promote in the highest degree his own happiness and the happiness of all to whom his influence may extend, he does *wrong*, and must suffer the reproaches of an accusing conscience, and incur the disapprobation of Him who "is greater than the heart and knoweth all things." Let him never forget, that time is short; that he has much to do; and that, of the manner in which these fleeting moments are spent, a review must hereafter take place, and an account be rendered. Let him hence be made to feel, that time is precious; that his privileges are precious; and that he has no *right* to waste the one or neglect the other.

LECTURE VI.

ON GRAMMAR.

BY GOOLD BROWN.

LECTURE VI

ON THE NATURE OF THE

SCIENCE OF GRAMMAR.

IF for a moment we consider the good and the evil that are done in the world through the medium of speech, we shall with one voice acknowledge, that not only the faculty itself, but also the manner in which it is used, is of incalculable importance to the welfare of man. In some of its relations, therefore, the general subject to which I invite your attention, appears to be sufficiently interesting. But it is not to language as the vehicle of moral or of immoral sentiment, of good or of evil to mankind, that the attention of the grammarian is particularly directed. A consideration of the subject in these relations, pertains rather to the moral philosopher. Nor are the arts of logic and rhetoric now considered to be properly within the grammarian's province. Modern science assigns to these their separate places, and restricts grammar, which at one period embraced all learning, to the knowledge of language, as respects its fitness to be the vehicle of any particular thought or sentiment which the speaker or writer may wish to convey by it. Grammar, therefore, has long been briefly defined, "*ars rectè scribendi, rectèque loquendi*," the art of writing and speaking correctly.

Despauter and Lily place writing first, as being that with which grammar is primarily concerned. For over any fugitive colloquial dialect, that is yet unfixed by visible signs, grammar has no control; and the speaking which this ancient defi-

nition embraces, is exclusively that which has reference to a knowledge of letters. Writing evidently improves speech. In proportion as books are multiplied, and the knowledge of written language is diffused, local dialects (which are beneath the dignity of grammar) will always be found to grow fewer, and their differences less. There are, in the various parts of the world, many languages to which the art of grammar has never yet been applied; and to which, therefore, the definition or true idea of grammar, however general, does not properly extend. Ruddiman, in his *Institutes of Latin Grammar*, reversed the terms *writing* and *speaking*, and defined grammar, "*ars rectè loquendi scribendique*;" and, either from mere imitation, or from the general observation that speech precedes writing, this arrangement has been followed by most modern grammarians. Dr. Lowth embraces both terms in a more general one; and says, "Grammar is the art of *rightly expressing* our thoughts by words." It is, however, the province of grammar, to guide us not merely in the expression of our own thoughts, but also in our apprehension of the thoughts, and our interpretation of the words, of others. The art of reading, therefore, is virtually embraced in grammar; for it is but the art of understanding and speaking correctly that which we have before us on paper.

Such is the peculiar power of language, that there is scarcely any subject so trifling, that it may not be plausibly magnified into something great; nor are there many things which cannot be ingeniously disparaged till they shall seem contemptible. Cicero goes further: "*Nihil est tam incredibile quod non dicendo fiat probabile*—there is nothing so incredible that it may not, from the manner of telling it, become probable." The study of grammar has been often overrated, and still oftener injuriously decried. I shall neither join with those who would lessen in the public esteem that general system of doctrines, which has been taught as grammar from time immemorial; nor attempt, either by magnifying its practical results, or by decking it out with my own imaginings, to invest it with any

artificial or extraneous importance. I shall not follow the footsteps of *Neef*, who tells you that "Grammar and incongruity are identical things," and scornfully rejects as nonsense every thing that has been taught under that name; because I am convinced that, of all methods of teaching, none goes further than his, to prove the assertion true. Nor shall I imitate the declamation of *Cardell*; who, in the second page of his Essay, recommends the general study of language on earth, from the consideration that "the faculty of speech is the medium of social bliss for superior intelligences in an eternal world;" and who, when he has exhausted censure in condemning the practical instructions of others, thus lavishes praise, in both his grammars, upon that formless, void, and incomprehensible theory of his own: "This application of words," says he, "in their endless use, by one plain rule, to all things which nouns can name, instead of being the fit subject of blind cavil, *is the most sublime theme presented to the intellect on earth. It is the practical intercourse of the soul, at once with its God, and with all parts of his works!*"—12mo. *Gram.* p. 87.—18mo. *Gram.* p. 49.

Here, indeed, a wide prospect opens before us; but he who traces science, must check imagination, and be content with sober truth.

"For apt the mind or fancy is to rove
Uncheck'd, and of her roving is no end."

MILTON.

Restricted within its proper limits, and viewed in its true light, the practical science of grammar has an intrinsic dignity and merit sufficient to throw back upon any man who dares openly assail it, the lasting stigma of folly and self-conceit. For though there be some geniuses who affect to despise the trammels of grammar rules, to whom it must be conceded that many things, which have been unskilfully taught as such, deserve to be despised; yet is it true, as Dr. Adam remarks, that "the study of grammar has been considered an object of great importance by the wisest men in all ages."

The great reputation of Dr. Adam leads me to pursue the quotation a little further: "But, like other sciences," he proceeds, "it has been involved in mystery, and perplexed with needless difficulties; so that, instead of facilitating the acquisition of languages, which was its original design, it has frequently served to render that more laborious."—*Pref. to Lat. Gram.*

These are the sentiments of a scholar, practical teacher, and man of sense; the success of whose Latin and English Grammar is a sufficient evidence that many others have coincided with him. And while the citation concedes, that there was ample room for improvement upon the grammars which were then in fashion, the whole scope of the writer goes to sustain that general system of doctrines which long use has rendered venerable, and long experience proved to be useful. Not that any ancient system of instruction, or any grammar of another language, can be entirely applicable to the present state of our tongue; for languages must needs differ greatly from one another, and even that which is called the same, may come in lapse of time to differ greatly from what it once was. But there are many points in which different languages coincide; and every item of grammatical doctrine is the more worthy to be preserved and regarded, as it approaches the nearer to universality. As for those corrections which want of skill or change of fashion may have made necessary, they may surely be adopted without a departure from any of the great principles of universal grammar. A readiness to throw aside the learning of ages, in favor of the unsettled notions and whimsical theories of neoteric guides, who would subvert the fundamental doctrines of grammar, to teach in a few worthless lessons what can never supply their place, is one of the follies of the present day, which every schoolmaster should exert his influence to counteract.

The general subject of grammar, even within its strictest limits, is so very comprehensive, that I can embrace in this lecture no more than a mere outline of certain views which

occur, as the mind surveys its nature and extent. I have no wish to enter into controversy :—no laurels are won upon the dry and dusty arena of verbal dispute. And of the particular details contained in every petty treatise on the subject, I shall have little or nothing to say. But let not those who imagine the elements to be the only practical part of grammar, suppose it irrelevant to speak of the origin, progress, and importance of the study, and of the rise and character of some of the methods and books by means of which it has been pursued. My remarks will probably be more intelligible, if reduced to distinct heads.

I. *Of the origin and utility of language in general.*

Revelation informs us that our first progenitor was not only endowed with the faculty of speech, but, as it would appear, actually incited by the Deity to exert that faculty in giving names to the objects by which he was surrounded. “Out of the ground the Lord God formed every beast of the field and every fowl of the air ; and *brought them unto Adam, to see what he would call them* : and whatsoever Adam called every living creature, that was the name thereof.” Gen. ii. 19. Subsequent to this, is the account of Eve’s creation. But, in the preceding chapter, the Deity is represented as *speaking unto them both*, with reference to dominion over the other creatures, &c. ; so that the order of the events cannot be clearly inferred from the order of the narration. The manner of this communication may also be a subject of doubt. Whether it was or was not made by a voice of words, may be questioned. Plato attributes the primitive words of the first language to a divine origin ; and Dr. Wilson says, “The transition from silence to speech, implies an effort of the understanding too great for man.

Language is either oral or written. Writing is generally considered an artificial invention, and supposed to have been wholly unknown in the early ages of the world. Its antiquity however, is great. Of this I shall presently state what is known,

The peculiar nature or power of language is a point worthy of our consideration. Words are in themselves but audible signs or arbitrary symbols used, by common consent, as significant of our ideas or thoughts. But so well are they fitted to be made at will the medium of mental conference, that nothing else can be conceived to equal them for this purpose. Yet it does not follow that they who have the greatest knowledge and command of words, have all that they could desire in this respect. For language is in its own nature but an imperfect instrument, and even when tuned with the greatest skill, will often be found inadequate to convey the impression with which the mind may labor. Some, however, may say, that this imperfection is but an incident of the common weakness or ignorance of human nature ; and that if a man always knew what to say to another, in order to persuade or confute, to encourage or frighten him, no insufficiency of this kind would ever be felt or thought of. This also is plausible ; but is the imperfection less for being sometimes traceable to an ulterior source ? The best and the wisest of men confess the inadequacy of language, and deplore its misuse ; yet, whatever may be its defects or abuses, it is almost the only medium for the communication of thought and the diffusion of knowledge. Bishop Butler remarks, in his *Analogy of Religion*, (a most valuable work, in a defective style), "The imperfections attending the only method by which nature enables and directs us to communicate our thoughts to each other, are innumerable. Language is, in its very nature, inadequate, ambiguous, liable to abuse even from negligence, and so liable to it from design, that every man can deceive and betray by it."

As words abstractly considered are empty and vain, being in their nature mere signs or tokens which derive all their value and power from the ideas and feelings which they suggest, it is evident, that he who would either speak or write well, must be furnished with something more than a knowledge of sounds and letters. Words fitly spoken are indeed both precious and beautiful—"like apples of gold in pictures of silver."

But it is not for him whose soul is dark, whose designs are selfish, whose affections are dead, or whose thoughts are vain, to say, with the son of Amram, "My doctrine shall drop as the rain, my speech shall distil as the dew ; as the small rain upon the tender herb, and as the showers upon the grass." It is not for him to exhibit the excellency of speech, because he cannot feel its power. It is not for him, whatever be the theme, to convince the judgment with deductions of reason, to fire the imagination with glowing imagery, or win with graceful words the willing ear of taste. His name shall never be enrolled in the list of those whose language has conferred either instruction or delight.

Man was made for society ; and, from the first period of human existence, the race were social. Monkish seclusion is manifestly unnatural ; and the wild independence of the savage, is properly denominated a state of nature, only in contradistinction from that state in which the arts are cultivated. But to civilized life, or that which is in any degree social, language is absolutely necessary. There is therefore no danger that the language of any nation shall fall into disuse, till the people by whom it is spoken, shall either adopt some other, or become themselves extinct. When the latter event occurs, as is the case with the ancient, Hebrew, Greek, and Latin, the language, if preserved at all from oblivion, becomes the more permanent ; because the causes which are constantly tending to improve or deteriorate every living language, have ceased to operate upon those which are learned only from ancient books. The inflections which compose the declensions and conjugations of the dead languages must remain forever as they are. When a nation changes its language, as did our forefathers in Britain, producing by a slow amalgamation of materials drawn from various tongues a new one differing from all, the first stages of its grammar will of course be chaotic and rude. Uniformity springs from the steady application of rules ; and polish is the work of taste and refinement. We may easily err by following the example of our

early writers with more reverence than judgment ; nor is it possible for us to do justice to the grammarians, whether early or late, without a knowledge both of the history and of the present state of this science. Indulge therefore a rapid glance at a few circumstances remote in time, yet nearer to the present purpose than that trodden and debated ground with which we are more familiar.

Some have supposed that the formation of the first language must have been very slow and gradual. But of this we have no proof ; nor is it possible now to ascertain what degree of perfection language at the first possessed. But, as languages are now known to improve in proportion to the improvement of society in civilization and intelligence, and as we do not suppose the first inhabitants of the earth to have been savages, it seems a plausible conjecture, that the primeval tongue was at least sufficient for all the ordinary intercourse of civilized men, and that in many instances human speech subsequently declined far below its original standard.

The analogy of words in the different languages has been thought by many to be sufficiently frequent and clear to suggest the idea of their common origin. Their differences are indeed great, but perhaps not greater than the differences in the several races of men, all of whom, as revelation teaches, sprung from one common stock. From the same source we learn, that till the year of the world 1844, "The whole world was of one language, and of one speech." At that period the whole world of mankind consisted only of the descendants of the eight souls who had been saved in the ark, and so many of the eight as had survived the flood one hundred and eighty-eight years. Then occurred that remarkable intervention of the Deity, in which he was pleased to confound their language, so that they could not understand one another's speech, and were consequently scattered abroad upon the face of the earth. This, however, in the opinion of many learned men, does not prove the immediate formation of any new languages. But, whether new languages were thus immediately formed or not,

the event, in all probability, laid the foundation for that diversity which subsequently obtained among the languages of the different nations which sprung from the dispersion ; and it may be regarded as the remote cause of the differences which now exist. But for the immediate origin of the peculiar characteristical differences which distinguish the various languages now known, we are not able with much certainty to account. Nor is there even much plausibility in the speculations of those grammarians who have attempted to explain the order and manner in which the declensions, the moods, the tenses, or other leading features of any language, were first introduced. For instance : Neilson's Theory of the Moods, published in the Classical Journal of 1819, though it exhibits ingenuity and learning, is liable to the strong objection, that it proceeds on the supposition that the moods of English verbs, and of several other derivative tongues, were invented in a certain order by persons not speaking a language learned chiefly from their fathers, but uttering a new one as necessity prompted. But when did this happen ? That no date is given, the reader regrets, but he cannot marvel.

By what successive changes the minor parts of speech have become what we now find them, the etymologist may often show to our entire satisfaction. But the utility of his curious inquiries may even here be overrated ; and whenever he ventures into the regions of conjecture, or allows himself to be reduced from the path of practical instruction, his errors are obstinate, and his guidance is dangerous. Men fond of such speculations, and able to support them with show of learning, have done more to unsettle the science of grammar, and to divert ingenious teachers from the best methods of instruction, than all other visionaries put together.

Of the art of writing, in which the science of grammar originated, we are not able to trace the commencement. Different nations have claimed the honor of this invention ; and it is not decided among learned men, to whom, or to what country, it belongs. The writings delivered to the Israelites

by Moses, are more ancient than any others now known. In the thirty-first chapter of Exodus, it is said, that God "gave unto Moses upon mount Sinai two tables of testimony, tables of stone, *written with the finger of God.*" But these divine testimonies, thus miraculously written, do not appear to have been the first writing; for Moses had been previously commanded to write an account of the victory over Amalek, "for a memorial in a book." Ex. xvii. 14.

The time at which Cadmus introduced this art into Greece, cannot be precisely ascertained. There is no reason to believe it was antecedent to the time of Moses; some chronologists make it between two and three centuries later. Nor is it very probable that Cadmus invented the sixteen letters of which he is said to have made use. His whole story is so wild a fable that nothing certain can be inferred from it. Sent in search of what he was destined never to find, yet meeting with the most unexpected things; after a series of wonderful achievements and bitter misfortunes, loaded with grief and infirm with age, he prayed the gods to release him from his distresses, and was changed into a serpent. Posterity, however, have made him some amends, by ascribing to him the invention of letters—and accounting him the worthy benefactor to whom the world owes the inestimable benefits derived from literature. I would not willingly rob him of this honor. But I must confess, there is no feature of the story, which I can conceive to give any countenance to his claim; except that as the great progenitor of the race of authors, his sufferings correspond well with the calamities of which that unfortunate generation have always so largely partaken.

The benefits of this invention, if it may be considered such, are certainly very great. In oral discourse the graces of elegance are more lively and attractive, but well-written books are the grand instructors of mankind, the most enduring monuments of human greatness, and the proudest achievements of human intellect. "The chief glory of a nation," says Dr. Johnson, "arises from its authors." Literature is important

in as much as it is subservient to objects of the very highest concern. Religion and morality, liberty and government, fame and happiness, are alike interested in the cause of letters. It was a saying of Pope Pius II. that common men should esteem learning as silver, noblemen value it as gold, and princes prize it as jewels. The uses of learning are seen in every thing that is not itself useless. It cannot be overrated, but where it is perverted; and whenever that occurs, the remedy is to be sought by opposing learning to learning, till the truth be manifest, and that which is reprehensible be made to appear so. Every man ought to feel himself interested in whatever concerns the welfare of his race; and, by those who have attained to a right understanding of any of the great questions in which that welfare is involved, argument should be pressed home to conviction, till every false doctrine stand refuted, and every false pretender exposed and neglected; then shall science honor them that honor her, and all her triumphs be told, all her instructions be recorded, in words that cannot be condemned.

II. *Of the origin and history of the English language.*

In order that we may set a just value upon the literary labors of those who gave particular attention to the culture of the English language in former times, and that we may the better judge of the credibility of modern pretensions to further improvement, it seems necessary to know something of the course of events through which its acknowledged melioration in earlier days took place. For, as Bacon quotes Aristotle, "*Qui respiciunt ad pauca, de facili pronunciant.*" He that takes a narrow view, easily makes up his mind. But what is any opinion worth, if further knowledge of facts can confute it?

Whatsoever is successively varied, and has either beginning or end of existence, may have also its particular history, if the

opportunity for writing it be not neglected. But such is the levity of mankind, that things of great moment are often left without memorial, while the hand of literature is busy to beguile the world with fictions vain, with prodigies and lies. The rude and cursory languages of barbarous nations, till the genius of grammar arise to their rescue, are among those transitory things which unsparing time hurries irrecoverably to oblivion. Tradition knows not what they were, for of their changes she makes no account. Philosophy tells us they are resolved into the variable, fleeting breath of the successive generations of those by whom they were spoken; whose kindred fate it was, to pass away unnoticed and nameless, lost in the elements from which they sprung.

Upon the history of the English language, darkness thickens as we tread back the course of time. We perceive, that, for a twofold reason, the subject of our inquiry becomes, at every step, more difficult and less worthy. We have now a range of English literature, both extensive and luminous; and though many modern writers, and even writers on grammar, are comparatively very deficient in style, it is safe to affirm that the English language in general has never been written or spoken with more propriety and elegance, than in the present age. Modern English we read with facility. Hence the best method of acquainting one's self practically with the history of the language, must be, to read some of our older authors in retrograde order, till the style employed at times more and more remote, become intelligible, and in some degree familiar to us. Pursued in this way, the study will be less difficult; and the labor of the curious inquirer, which may be suspended at pleasure, will be better repaid, than if he proceed in the order of history, and attempt at first the Saxon remains.

The value of a language as an object of study, depends chiefly on the character of the books it contains, and secondarily on its connexion with others more worthy to be thoroughly known. The twofold reason to which I have alluded, as being calculated soon to discourage research, is the obvious

fact, that as our language took its rise during the barbarism of the dark ages, the books through which its early history must be traced, are not only few and meagre, but, in respect to grammar, unsettled and diverse. It is not to be expected that inquiries of this kind will ever engage the attention of any very considerable number of persons. Over the minds of the reading public, the attractions of novelty hold a much greater influence, than any thing that is to be discovered in the dusk of antiquity. All old books contain a greater or less number of obsolete words and antiquated modes of expression, which puzzle the reader, and call him too frequently to his glossary. And even the most common terms, when they appear in their ancient orthography, are often so disguised as not to be readily recognized. These circumstances (the last of which should be a caution to us against innovations in spelling) retard the progress of the reader, impose a labor too great for the ardor of his curiosity, and soon dispose him to rest satisfied with an ignorance, which, being general, is not likely to expose him to censure. For these reasons, ancient authors are little read; and the real antiquary is considered a man of odd habits, who, by a singular propensity, is led into studies both unfashionable and fruitless—a man who ought to have been born in the days of old, that he might have spoken the language he is so curious to know, and have appeared in the costume of an age better suited to his taste.

But learning is ever curious to explore the records of time, as well as the regions of space; and wherever her institutions flourish, she will amass her treasures, and spread them before her votaries. Difference of languages she easily overcomes; but the leaden reign of unlettered ignorance defies her scrutiny. Hence of one period of the world's history she ever speaks with horror—that long night of apostacy during which, like a lone Sibyl, she hid her precious relics in solitary cells, and fleeing from degraded christendom, sought refuge with the eastern caliphs. “The decline of true religion carried with it almost every vestige of civil liberty, of classical literature, and

of scientific knowledge ; and it will generally be found in experience that they must all stand or fall together." In the tenth century, beyond which we find nothing that bears much resemblance to the English language, this mental darkness appears to have gathered to its deepest obscurity, and, at this period, England was sunk as low in ignorance, superstition, and depravity, as any other part of Europe.

The English language gradually varies, as we trace it back, and becomes at length identified with the Anglo-Saxon ; that is, with the dialect spoken by the Saxons after their settlement in England. These Saxons were a fierce, warlike, unlettered people from Germany ; whom the ancient Britons had invited to their assistance against the Picts and Scots. Cruel and ignorant, like their Gothic kindred who had overrun the Roman empire, they came not for the good of others, but to accommodate themselves. They accordingly seized the country, destroyed or enslaved the ancient inhabitants, or more probably, drove the remnant of them into the mountains of Wales. Of Welsh or Ancient British words, Burke enumerates but one hundred and eleven in our language ; and Dr. Johnson, who makes them ninety-five, argues from their almost total absence, that the Saxons could not have mingled at all with these people, or even have retained them in vassalage.

The Saxons entered Britain in the year 449. But what was the form of their language at that time, cannot now be known. It was a dialect of the Gothic or Teutonic ; which is considered the parent of all the northern tongues of Europe, except some few of Sclavonian origin. The only remaining monument of the Gothic language is a copy of the Gospels preserved at Upsal, and called from its embellishment, *the Silver Book*. It has been three times printed in England. We possess not yet in this country all the advantages which may be enjoyed by literary men in the land of our ancestors ; but the art of printing is fast equalizing unto all civilized nations the privilege of drinking at the fountains of knowledge.

It is neither liberal nor just to argue unfavorably of the intellectual or the moral condition of any remote age or country, merely from our own ignorance of it. It is true, we can derive from no quarter a favorable opinion of the state of England after the Saxon invasion, and during the tumultuous and bloody government to the heptarchy. But I will not darken the picture through design. If justice were done to the few names—to Gildas the wise, the memorialist of his country's sufferings and censor of the nation's depravity, who appears a solitary star in the night of the sixth century—to the venerable Bede, the greatest theologian, best scholar, and only historian of the seventh—to Alcuin, the abbot of Canterbury, the luminary of the eighth—to Alfred the Great, the glory of the ninth, great as a prince, and greater as a scholar, seen in the evening twilight of an age in which the clergy could not read;—if justice were done to all such, we might find something, even in these dark and rugged times, if not to soften the grimness of the portrait, at least to give greater distinctness of feature.

In tracing the history of our language, Dr. Johnson, who does little more than give examples, cites as his first specimen of ancient English, a portion of king Alfred's paraphrase in imitation of Boethius. But this language of Alfred's is not English; but rather, as the learned doctor himself considered it, an example of the Anglo-Saxon in its highest state of purity. This dialect was first changed by admixture with words chiefly derived from the Danish and the Norman; and, still being comparatively rude and meagre, afterwards received large accessions from the Latin, the French, the Greek, the Dutch—till, by gradual changes, which the etymologist may exhibit, there was at length produced a language bearing a sufficient resemblance to the present English to deserve to be called English at this day. The formation of our language cannot with propriety be dated earlier than the thirteenth century. It was then that a free and voluntary amalgamation of its chief constituent materials took place; and this was somewhat ear-

lier than we date the revival of learning. The English of the thirteenth century is scarcely intelligible to the modern reader. Dr. Johnson calls it a kind of intermediate diction, neither Saxon nor English ; and says, that Sir John Gower, who wrote in the latter part of the fourteenth century, was the first of our authors who can properly be said to have written English. Contemporary with Gower, the father of English poetry, was the still greater poet, his disciple Chaucer ; who embraced many of the tenets of Wickliffe, and imbibed something of the spirit of the reformation, which was now begun.

The literary history of the fourteenth and fifteenth centuries is full of interest ; for it is delightful to trace the progress of great and obvious improvement. The reformation of religion and the revival of learning were nearly simultaneous. Yet individuals may have acted a conspicuous part in the latter, who had little to do with the former ; for great learning does not necessarily imply great piety, though (as Dr. Johnson observes) "the Christian religion always implies or produces a certain degree of civility and learning." Peculiar honor is due to those who lead the way in whatever advances human happiness. And surely our just admiration of the character of the reformers must be not a little enhanced, when we consider what they did for letters as well as for the church. Learning does not consist in useless jargon, or mere words ; else the seventeen folios of St. Thomas Aquinas, the angelical doctor of the thirteenth century, and the profound disputations of his great rival Duns Scotus the subtile, for which they were revered in their own age, had not gained them the contempt of all posterity. From such learning the lucid reasoning of the reformers delivered the halls of instruction. The school divinity of the middle ages passed away before the presence of that which these men learned from the Bible, as did in a later age the Aristotelian philosophy before that which Bacon drew from nature.

Towards the latter part of the fourteenth century, Wickliffe furnished the first entire translation of the Bible into English. In like manner did the Germans, a hundred and fifty years after, receive it in their tongue from the hands of Luther; who says, that at twenty years of age, he himself had not seen it in any language. Wickliffe's English style is elegant for the age in which he lived, yet very different from what is elegant now. To give specimens, would detain me too long upon a topic which I fear is not very interesting. This first English translation of the Bible, being made about a hundred years before the introduction of printing into England, could not have been very extensively circulated. A large specimen of it may be seen in Dr. Johnson's history of the English language.

The changes which our language has undergone within the last three hundred years, may easily be traced by any one who can read. But it ought to be known, that the printers have taken considerable liberty in modernizing the orthography of Shakspeare, and other old authors still popular. How far such liberty is justifiable, it is difficult to say. It is very desirable that the orthography of our language should be made uniform and remain permanent. Great alterations cannot suddenly be introduced, and there is in stability an advantage which will counterbalance that of a slow approximation to regularity.

English books began to be printed in the latter part of the fifteenth century; at which time the press threw open the flood gates of knowledge, the streams of which are now pouring forth, in a copious, increasing, but too often turbid tide, upon all the civilized nations of the earth. This mighty engine afforded a means by which superior minds could act more efficiently and more extensively upon society in general. And thus, by the exertions of genius adorned with learning, our native tongue has been made the polished vehicle of the most interesting truths, and of the most important discoveries; and has become a language copious, strong, refined, and ca-

pable of no inconsiderable degree of harmony. Nay, it is esteemed by some, who claim to be competent judges, to be the strongest, the richest, the most elegant, and the most susceptible of sublime imagery, of all the languages in the world.

III. *Of the grammatical study of the English language.*

The English language may now be regarded as the common inheritance of about fifty millions of people; who are at least as highly distinguished for virtue, intelligence, and enterprise, as any other equal portion of the earth's population. All these are more or less interested in the purity, permanency, and right use of that language; in as much as it is to be the medium of mental intercourse with others for them and their children, and the vehicle of all they value in the reversion of ancestral honor, or in the transmission of their own. It is even impertinent, to tell a man of any respectability, that the study of this his native language is an object of great importance and interest: if he does not, from these most obvious considerations, feel it to be so, the suggestion will be less likely to convince him, than to give offence, as conveying an implicit censure. Every person who has any ambition to appear respectable among people of education, whether in conversation, in correspondence, in public speaking, or in print, must be aware of the absolute necessity of a competent knowledge of the language in which he attempts to express his thoughts. Many a ludicrous anecdote is told of persons venturing to use words of which they did not know the proper application; many a ridiculous blunder has been published to the lasting disgrace of the writer; and so intimately does every man's reputation for sense depend upon his skill in the use of language, that it is scarcely possible to acquire the one without the other. Who can tell how much of his own good or ill success, how much of the favor or disregard with which he himself has been treated, may have depended upon that skill or deficiency in grammar, of which, as often as he has

either spoken or written, he must have afforded a certain and constant evidence?

To excel in grammar, is but to know better than others wherein grammatical excellence consists; and, as this excellence, whether in the thing itself or in him that attains to it, is merely comparative, there can be no fixed point of perfection beyond which such learning may not be carried. In speaking or writing to different persons, and on different subjects, it is necessary to vary one's style with great nicety of address; and in nothing does true genius more conspicuously appear, than in the facility with which it adopts the most appropriate expressions, leaving the critic no word to amend. Such facility of course supposes an intimate knowledge of all words in common use, and also of the principles on which they are to be combined. With a language which we are daily in the practice of hearing, speaking, reading, and writing, we may certainly acquire no inconsiderable acquaintance, without the formal study of its rules. All the true principles of grammar were presumed to be known before they were written for the aid of learners; nor have they acquired any independent authority by being recorded in a book, and denominated grammar. The teaching of them, however, has tended in no small degree to settle and establish the construction of the language, to improve the style of English writers, and to enable us to ascertain with more clearness the true standard of grammatical purity. He who learns only by rote, may speak the words or phrases which he has thus acquired; and he who has the genius to discern intuitively what is regular and proper, may have further aid from the analogies which he thus discovers; but he who would add to such acquisitions the satisfaction of knowing what is right, must make the principles of language his study.

To produce an able and elegant writer, may require something more than a knowledge of grammar rules; yet it is argument enough in favor of those rules, that without a knowledge of them no elegant and able writer is produced. Who

that considers the infinite number of phrases which words in their various combinations may form, and the utter impossibility that they should even be recognized individually for the purposes of instruction or criticism, but must see the absolute necessity of dividing words into classes, and of showing by general rules of formation and construction the laws to which custom subjects them, or from which she allows them in particular instances to deviate? The art of writing and speaking must continue to be learned by some persons; because it is of indispensable use to society. And the only question is, whether children and youth shall acquire it by a regular process of study and method of instruction, or be left to glean it solely from their own occasional observation of the manner in which other people speak and write. The practical solution of this question belongs chiefly to parents and guardians. But if past experience and the history of education be taken for guides, the study will not be neglected, and the method of inculcation will become an object of particular inquiry and solicitude.

English grammar is, or ought to be, a regular and well-digested art, or practical science; every part of which must be true, and, of course, consistent with every other part of the entire system. It is as susceptible of clearness and consistency of expression, as any other branch of instruction. Like every other art, it must have its technical terms, all of which should be plainly, briefly, and handsomely defined; all its rules and explanations should be delivered with the greatest possible accuracy; the book by which it is taught, should certainly contain no errors either of thought or expression, but such as are exhibited for correction; and its style throughout should be modern, neat, and perspicuous. How far any English grammarian has attained to these first requisites of a good grammar, I shall not now say; certain it is, than many have fallen lamentably short of them.

The English language ought to be learned at school, in the same manner as all other languages are; by the study of its

grammar, accompanied with regular exercises of parsing, correcting, pointing, and scanning; and by the perusal of its writers, accompanied with stated exercises in composition and elocution. In books of criticism, our language is more abundant than any other. Some of the best of these the student should peruse, as soon as he can understand and relish them. Such a course, pursued with regularity and diligence, will be found the most direct way of acquiring an English style at once pure, correct, and elegant.

But in all untrained and vulgar minds, ambition of excelling in such things is only a dormant or very weak principle. Hence many are lamentably careless of what they utter, both as it respects the matter, and the manner; and some seem ever prone to the imitation of low example—to the practice of every abuse of which language is susceptible. Well might the poet exclaim,

“Sacred Interpreter of human thought,
How few respect or use thee as they ought!”

COWPER.

Nay, while the most liberal of our lexicographers notice many terms but to censure them, and omit still more as being beneath their notice, we have had, even among professed grammarians, men who could count the favor of the vulgar at the expense of all the daughters of Mnemosyne. Hence the enormous insult to learning, conveyed in the following scornful quotations:—

“Grammarians, go to your *tailors* and *shoemakers*, and learn from them the rational art of constructing your grammars!”—*Neef's Method of Education*, p. 62.

“From a labyrinth without a clew, in which the most enlightened scholars of Europe have mazed themselves and misguided others, the author ventures to turn aside.”—*Cardell's Gram.* 12mo. p. 15.

“The nations of *unlettered men* so adapted their language to philosophic truth, that all physical and intellectual

research can find no essential rule to reject or change."—*Ibid.* p. 91.

I have shown that the nations of unlettered men are among that portion of the earth's population, upon whose language the genius of Grammar has never yet condescended to look down :—That people who make no pretensions to learning, can furnish better models or instructions than the most enlightened scholars, is an opinion which ought not to be disturbed by argument.

If every thing that has been taught under the name of grammar, is to be considered as belonging to the science, it will be impossible ever to determine in what estimation the study of it ought to be held ; for all that has ever been urged either for or against it, may, upon such a principle, be proved by a reference to different authorities and irreconcilable opinions. But all who are studious to know and content to follow the fashion established by the concurrent authority of the learned, may at least have some standard to refer to ; and if a grammarian's rules be based upon this authority, it must be considered the exclusive privilege of the unlearned to despise them—as it is of the unbred to condemn the rules of civility. Who is so destitute of sense as to deny, that a graceful and easy conversation in the private circle, a fluent and agreeable delivery in public speaking, a ready and natural utterance in reading, a pure and elegant style in composition, are accomplishments of a very high order ? And yet of all these, the proper study of English grammar is the true foundation. This would never be denied or doubted, if young people did not find, under some other name, better models and more efficient instruction, than what was practised on them for grammar in the school-room. No disciple of an able grammarian can speak ill of grammar, unless he belong to that class of knaves who vilify what they despair to reach.

By taking advantage of the ductility of childhood, intelligent parents and judicious teachers may exercise over the studies, opinions, and habits of youth a strong and salutary control ;

and it will seldom be found in experience, that those who have been early taught to consider grammatical learning as worthy and manly, will change their opinion in after life. But the study of grammar is not so enticing that it may be disparaged in the hearing of the young, without injury. What would be the effect of the following sentence, which I quote from a late well-written religious homily? "The pedagogue and his dunce may exercise their wits correctly enough, in the way of grammatical analysis, on some splendid argument, or burst of eloquence, or thrilling descant, or poetic rapture, to the strain and soul of which not a fibre in their nature would yield a vibration."—*N. Y. Observer*, vol. ix. p. 73.

Would not the bright boy who heard this from the lips of his reverend minister, be apt the next day to grow weary of the parsing lesson required by his schoolmaster? And yet what truth is there in it? One can no more judge of the fitness of language without regard to the meaning conveyed by it, than of the fitness of a suit of clothes without knowing for whom they were intended. The grand clew to the proper application of all syntactical rules, is *the sense*; and as any composition is faulty which does not rightly deliver the author's meaning, so every solution of a word or sentence is necessarily erroneous, in which that meaning is not carefully noticed and literally preserved. To parse rightly and fully, is nothing else than to understand rightly and explain fully; and whatsoever is well expressed, it is a shame either to misunderstand or to misinterpret.

This study, when properly conducted and liberally pursued, has an obvious tendency to dignify the whole character. How can he be a man of refined literary taste, who cannot speak and write his native language grammatically? And who will deny that every degree of improvement in literary taste tends to brighten and embellish the whole intellectual nature? The several powers of the mind are not so many distinct and separable agents which are usually brought into exercise one by one; and even if they were, there might be found, in a judi-

cious prosecution of this study, a healthful employment for them all. The imagination, indeed, has nothing to do with the elements of grammar ; but in the exercise of composition, young fancy may spread her wings as soon as they are fledged ; and for this exercise the previous course of discipline will have furnished both language, taste, and sentiment.

The regular grammatical study of our language is a thing of recent origin. Fifty or sixty years ago, such an exercise was scarcely attempted in any of the schools, either in this country or in England. Of this fact we have abundant evidence both from books, and from the testimony of our venerable fathers yet living. How often have these presented this as an apology for their own deficiencies, and endeavored to excite us to greater diligence, by contrasting our opportunities with theirs ! Is there not truth, is there not power in the appeal ? And are we not bound to avail ourselves of the privileges which they have provided, to build upon the foundations which their wisdom has laid ; and to carry forward the work of improvement ? Institutions can do nothing for us, unless the love of learning preside over and prevail in them. The discipline of our schools can never approach perfection, till those who conduct, and those who frequent them, are strongly actuated by that disposition of mind, which generously aspires to all attainable excellence. " If there be *any virtue*, if there be *any praise*, think on these things." Phil. iv. 8.

To rouse this laudable spirit in the minds of our youth, and to satisfy its demands whenever it appears, ought to be the leading objects with those to whom is committed the important business of instruction. A dull teacher, wasting time in a schoolroom with a parcel of stupid or indolent boys, knows nothing of the satisfaction either of doing his own duty, or of exciting others to the performance of theirs. He settles down in a regular routine of humdrum exercises, and dreading as an inconvenience even such change as proficiency in his pupils must bring on ; and is well content to do little good for little money, in a profession which he honors with his services

merely to escape starvation. He has, however, one merit: he pleases his patrons, and is the only man that can; for they are of that class who dread the expense even of a schoolbook, and always judge those things to be cheapest which cost the least and least the longest. What such a man thinks of English Grammar, I shall not stop to ask.

The grammatical study of our language was early and strongly recommended by Locke, and other writers on education, whose character gave additional weight to an opinion which they enforced with the clearest arguments. But, either for want of a good grammar, or for default of teachers skilled in the subject and sensible of its importance, the general neglect, so long complained of as an imperfection in our methods of education, has been but recently and partially obviated. Not thirty years ago, that eminent teacher, Dr. William Barrow of London, repeated the complaint which Locke had made more than a century before, and alleged that in the public schools of England, the language was not frequently read, and was still less frequently written. He states the consequence: "A classical scholar too often has his English style to form when he should communicate his acquisitions to the world. In some instances, it is never formed with success; and the defects of his expression either deter him from appearing before the public at all, or at least counteract in a great degree the influence of his work and bring ridicule upon the author."—*Barrow's Essays*, p. 87. These evils, he suggests, might easily be prevented or diminished by the regular study of English grammar.

I am not of opinion that it is expedient to press this study to much extent, if at all, on those whom poverty or incapacity may have destined to situations in which they will never hear of it afterwards. The course of nature cannot be controlled; and fortune does not permit us to prescribe the same course of discipline for all. To speak the language which they have learned without study, and to read and write for the most

common purposes of life, may be education enough for those who can be raised no higher. But, favored as our country is, with great facilities for carrying forward the work of improvement in every thing which can contribute to national glory and prosperity, I would, in conclusion of this topic, submit—that a critical knowledge of our common language is a subject worthy of the particular attention of all who have the genius and the opportunity to attain it—that on the purity and propriety with which American authors write this language, the reputation of our national literature greatly depends—that in the preservation of it from all changes which ignorance may admit or affectation invent, we ought to unite, as having one common interest—that a fixed and settled orthography is of great importance, as a means of preserving the etymology, history, and identity of words—that a grammar, freed from errors and defects, and embracing a complete code of definitions and illustrations, rules and exercises, is of primary importance to every student, and a great aid to teachers—that as the vices of speech as well as of manners are contagious, it becomes those who have the care of youth, to be masters of the language in its purity and elegance, and to avoid as much as possible every thing that is reprehensible either in thought or expression.

IV. *Of the best method of teaching Grammar.*

It is hardly to be supposed that any person can have a very clear conviction of the best method of doing a thing, who shall not first have acquired a pretty correct and adequate notion of the thing to be done. Arts must be taught by artists; sciences by learned men; and if Grammar is the science of words, the art of writing and speaking well, the best speakers and writers will be the best teachers of it, if they choose to confine their attention to so humble an employment. For, without disparagement of the many worthy men whom choice or necessity has made schoolmasters, it may be admitted that the low estimation in which schoolkeeping is held, does mostly ex-

clude from it the first order of talents and scholarship. It is one strong proof of this, that we have heretofore been content to receive our digests of English grammar, either from men who had had no practical experience in the labors of a school-room, or from miserable modifiers and abridgers, destitute alike of learning and industry, judgment and skill.

But to have a correct and adequate notion of English grammar, and of the best method of learning or teaching it, is no light attainment. The simple definition in which the general idea is embraced, "Grammar is the art of writing and speaking correctly," however useful in order to fix the learner's conception, can scarcely give him a better knowledge of the thing itself, than he would have of the art of painting, when he had learned from Dr. Webster, that it is "the art of representing to the eye, by means of figures and colors, any object of sight, and sometimes emotions of the mind." The first would no more enable him to write a sonnet, than the second to take his master's likeness. The force of this remark extends to all the technical divisions, definitions, rules, and arrangements of grammar; the learner may commit them all to memory, and know but very little about the art. This fact, too obvious to be questioned, has been made the basis of the strongest argument ever raised against the study of grammar, according to the ordinary technical method of teaching it. It has led men, even of the highest talents, to doubt the expediency of that method, and to invent others by which they hoped to be more successful. The futility of the old accidence has been inferred from it, and urged, even in some well-written books, with all the plausibility of a fair and legitimate deduction. The hardships of children, compelled to learn what they did not understand, have been bewailed in prefaces and reviews; and the sympathies of nature, with accumulated prejudices, have been excited against that method of teaching grammar, which after all will be found in experience to be essentially the easiest, the shortest and the best. I mean the plain didactic method of definition and example, rule and praxis.

We admit that definitions and rules committed to memory and not reduced to practice, will never enable any one to speak and write correctly. But does it follow, that to study grammar by learning its principles, or to teach it technically by formal lessons, is of no real utility? Surely not—for the same admission must be made with respect to the definitions and rules of every practical science in the world; and the technology of grammar is even more essential to a true knowledge of the subject, than that of almost any other art. "To proceed upon principles at first," says Dr. Barrow, "is the most compendious method of attaining every branch of knowledge; and the truths impressed upon the mind in the years of childhood, are ever afterwards the most firmly remembered, and the most readily applied."—*Essays*, p. 84.

Reading, as I have said, is a part of grammar; and it is a part which must of course precede what is called in the schools the study of grammar. Any person who can read, can learn from a book such simple facts as are within his comprehension; and we have it on the authority of Dr. Adam, that "The principles of grammar are the first abstract truths which a young mind can comprehend."—*Pref. to Gram.*

The objection drawn from the alleged inefficiency of this method, lies solely against the practice of those teachers who disjoin the principles and the exercises of the art; and who, either through ignorance or negligence, impose only such tasks as leave the pupil to suppose, that the committing to memory of definitions and rules, constitutes the whole business of grammar. Such a method is no less absurd in itself, than contrary to the practice of the best teachers from the very origin of the study. The epistle prefixed to King Henry's Grammar almost three centuries ago, and the very sensible preface to the old British Grammar, republished in this city in 1784, give evidence enough that a better method of teaching has long been known. Nay, in my opinion, the very best method cannot be essentially different from that which has been longest in use, and probably most known. In etymology

and syntax, the pupil should be alternately exercised in learning small portions of his book, and then applying them in parsing or correcting, till the whole is rendered familiar. Something like this has long been practised, but seldom with sufficient regard to accuracy and order. It should be understood, that in parsing any particular word, or part of speech, there are just so many things to be said of it, and to be said in the best manner: so that whoever tells fewer, omits something requisite; whoever says more, inserts something irrelevant; and whoever states it otherwise, either blunders in point of fact, or impairs the expression. The practice of correcting false syntax orally, by regular and logical forms, and the writing-out of a series of exercises embracing all the parts of grammar, will also be of essential service.

Murray evidently intended that his book of exercises should be constantly used with his grammar; but he made the examples in the former so dull and prolix, that I have never yet heard of a boy who had gone through them all agreeably to his direction. The publishing of them in a separate volume, has probably given rise to the absurd practice of endeavoring to teach his grammar without them. The whole volume though much too large for common schools is insufficient for a proper elucidation of the subject; because it lacks variety, and, like his grammar, leaves many of the most important doctrines untouched. Of course, all those abridgements in which only certain parts of the two books are combined, are still more deficient. The forms of parsing and correcting, which this author furnishes, are also misplaced; and, when found by the learner, are of little use. They are so verbose, awkward, irregular, and deficient, that the pupil must be a dull boy, or utterly ignorant of grammar, if he cannot express the facts extemporaneously in better English. When we consider how exceedingly important it is, that the business of a school should proceed without loss of time, and that in the oral exercises of parsing and correcting, each pupil should go through his part promptly,

clearly, correctly, and fully, we cannot think it a light objection that these forms, so often to be repeated, are badly written.

Indulge a brief illustration. First—from his etymological parsing: “O Virtue! how amiable thou art!” Here his form for the word *Virtue* is—“*Virtue* is a *common substantive*, of the *neuter* gender, of the *third* person, in the singular number, and the nominative case.” It should have been—“*Virtue* is a common *noun*, personified *proper*, of the *second* person, singular number, *feminine* gender, and nominative case.” And then the definitions of all these things should have followed. He gives the class of this noun wrong, for virtue addressed becomes an individual;—he gives the gender wrong, and in direct contradiction to what he says of the word, in his section on gender; he gives the person wrong, as may be seen by the pronoun *thou*;—he repeats the definite article three times unnecessarily, and inserts two needless prepositions, making them different where the relation is precisely the same:—and all this, in a sentence of two lines, to tell the properties of the noun *virtue*!—But, in etymological parsing, the definitions explaining the properties of the parts of speech, ought to be regularly and rapidly rehearsed by the pupil, till all of them become perfectly familiar. These the author omits; and, on account of this omission, his whole method of etymological parsing is miserably deficient.

Secondly—from his syntactical parsing: “Vice degrades us.” Here his form for the word *Vice* is—“*Vice* is a common substantive, of the third person, in the singular number, and the nominative case.” Now, when the learner is told that this is the syntactical parsing of a noun, and the other the etymological, he will of course conclude, that to advance from the etymology to the syntax of this part of speech, is merely to omit the gender—this being the only difference between the two forms. But even this difference had no other origin than Murray's carelessness in preparing his octavo book of exercises—the gender being inserted in the duodecimo. But what then? Is the syntactical parsing of a noun to be pre-

cisely the same as the etymological? Never. But Murray, and all who admire and follow his work, are content to parse many words by halves—making a distinction, and yet often omitting, in both parts of the exercise, every thing which constitutes the difference. He should here have said—“*Vice* is a common noun, of the third person, singular number, neuter gender, and nominative case: and is the subject of *degrades*; according to the rule which says, ‘A noun or a pronoun which is the subject of a verb, must be in the nominative case.’ Because the meaning is—*vice degrades*.” This is the whole description of the word with its construction; and to say less, is to leave the matter unfinished.

So far as my observation has extended, the two examples which I have just cited, are a pretty fair specimen of the crude and faltering jargon which a vast majority of our books on grammar put into the mouths of boys under the name of parsing. Some, however, are in this respect more regular and complete, while they have perhaps little merit in other particulars. We have also had many able teachers, who, by prescribing forms of praxis for their own pupils, have remedied in a great measure the embarrassments naturally arising from such a deficiency in their manners, and have taught successfully from books which were neither accurate nor methodical.

Without oral instruction and oral exercises, a correct habit of speaking our language can never be acquired; but written rules and exercises in writing, are perhaps quite as necessary, for the formation of a good style. Wherefore all these should be combined in our course of English grammar; and in order to accomplish both objects at once, the written doctrines should statedly be made the subject of a critical exercise in utterance. So that the boy who is parsing a word or sentence in the hearing of others, may impressively realize, that he is then and there exhibiting his own skill, or deficiency in oral discourse. He should be made to feel that he is bound by every consideration of respect for himself or for those who hear him, to proceed with his explanation and rehearsal in a clear and intelligible manner

without drawling, stopping, hesitating, faltering, omitting, miscalling, reiterating, stuttering, hurrying, slurring, mouth-ing, misquoting, mispronouncing, or any of the thousand faults which render utterance disagreeable and inelegant. It should be strongly impressed upon him, that the grand object of the whole business is his own practical improvement; that a habit of speaking clearly and agreeably is itself one half of the great art of grammar; that to be slow and awkward in parsing, is unpardonable negligence, and culpable waste of time; that to commit blunders in rehearsing grammar, is to speak badly about the art of speaking well; that his recitations must needs be limited to such things as he knows, and must be repeated till he can say them without mistake; finally, that he must be very attentive to the utterance of those who speak well, if he would learn to improve his own. He must not be allowed to forget, that a full and open pronunciation of the long vowel sounds, a clear articulation of the consonants, a forcible and well-placed accent, and a distinct utterance of the unaccented syllables, distinguish the elegant speaker.

The exercise of parsing should be commenced immediately after the first lesson of etymology—the lesson in which are contained the definitions of the ten parts of speech; and should be carried on progressively till it embraces all the doctrines which can be applied in the resolution of sentences. If it be performed according to the method which I am endeavoring to explain, it will soon make the student perfectly familiar with all the primary definitions and rules of grammar. It asks no aid from the dictionary, if the pupil knows the meaning of the words he is parsing; and very little from the teacher, if the definitions and rules are well expressed and well exemplified in the book. It requires of the pupil just enough of thought to keep the mind attentive to what the lips are uttering, while it advances by such easy gradations and constant repetitions, as leave him utterly without excuse, if he does not know what to say. Being neither wholly extemporaneous, nor wholly rehearsed by rote, it has more dignity than a schoolboy's con-

versation, and more ease than a formal recitation; and is therefore an exercise well calculated to induce a habit of uniting correctness with fluency in ordinary speech—a species of elocution as valuable as any other.

Thus would I unite the practice with the theory of grammar; endeavoring to express its principles with all possible perspicuity, purity, and propriety, of diction; retaining, as necessary parts of the subject, those technicalities which the pupil must needs learn in order to understand the disquisitions of grammarians in general; adopting every important feature of that system of doctrines which appears to have been longest and most generally taught; making such improvements as the further progress of our literature, and a minute observation of facts, may warrant or require; and attempting to amend, not so much the grammar of our language with reference to men, as the grammar of our schools, for the advancement of youth. The teacher is presumed to be competent. It is the learner's diction that is to be improved; and this method of instruction will be found well calculated to effect that improvement; because it demands of him not only to answer questions on grammar, but to make a prompt and practical application of what he has just learned.

Of all methods of teaching, this is the best supported by experience; and, whatever objections may have been raised against it, it will probably be found on examination to be the most analogous to nature. It begins with a classification of the words, or elements, which constitute the language, and proceeds to divide further, according to specific differences and qualities, till all the classes, properties, and relations, of the words, in any intelligible sentence, become obvious and determinate: and he to whom these things are known, is a good grammarian. But the disposition of the human mind to generalize the objects of thought, and to follow broad analogies in the use of words, discovers itself early, and seems to be an inherent principle of our nature. Hence, in the language of children and illiterate people, many words are regularly inflected, even

in opposition to the most common usage. It is admitted, that by this method of teaching, attention and memory are more demanded than judgment; and some words may be learned before the ideas represented by them are fully comprehended or the things spoken of are fully understood. But this seems necessarily to arise from the order of nature in the development of the mental faculties; and an acquisition cannot be lightly esteemed, which has signally augmented and improved that faculty on which the pupil's future progress depends.

The memory, indeed, should never be cultivated at the expense of the understanding; as is the case, when the former is tasked with lessons by which the latter is misled and bewildered. But truth, whether fully comprehended or not, has no perplexing inconsistencies. And it is manifest that that which does not in some respect surpass the understanding, can never enlighten it—can never awaken the spirit of inquiry, or satisfy research. He who by study has once stored his memory with the sound language of any true and important doctrine, can never, without some folly or conceit akin to madness, repent of the acquisition. Milton, in his academy, professed to teach things, rather than words; and many others have made plausible profession of the same thing since. But it does not appear, that even in the hands of Milton, the attempt was crowned with any remarkable success.

The vain pretensions of several modern simplifiers, contrivers of machines, charts, tables, picknicks, dialogues, vincula, ocular analyses, inductive exercises, intellectual methods, and new theories, for the purpose of teaching grammar, may serve to deceive the ignorant, to amuse the visionary, and to excite the admiration of the credulous; but none of these inventions has any favorable relation to the improvement of youth in the art of writing and speaking correctly. The definitions and rules which constitute the doctrines of grammar, may be variously expressed, arranged, illustrated, and applied; and, in the expression, arrangement, illustration, and application of them, there may be room for some amendment; but no con-

trivance can ever relieve the pupil from the necessity of committing them thoroughly to memory. The experience of all civilized ages and countries is a confirmation of this ; and the judicious teacher, though he will not shut his eyes to a real improvement, will be cautious of renouncing the practical lessons of hoary experience for the futile notions of a vain projector.

Some have been beguiled with the idea, that great proficiency in grammar was to be made by means of a fanciful method of induction. But if the scheme does not make better writers than are the generality of those who have adopted it, it will be found of little use. By the happy method of Bacon, to lead philosophy into the common walks of life, into the ordinary business and language of men, is to improve the condition of humanity ; but, in teaching grammar, to desert the plain didactic method of definition and example, rule and praxis, and pretend to lead children by philosophic induction into a knowledge of words, is to throw down the ladder of learning, that boys may imagine themselves to ascend it, while they are merely stiling over the low level upon which its fragments are cast.

“The first and highest philosophy,” says Puffendorf, “is that which delivers the most accurate and comprehensive definitions of things.”—*Law of Nature and of Nations*, p. 1.

But the nature of every general definition or rule is didactic, and not inductive, or exquisitesive. And had this high philosophy been properly applied to the science of grammar, there would have been much less complaint of the difficulty and uncertainty of the study. Murray admits that, “It is easy to advance plausible objections against almost every definition, rule, and arrangement of grammar.”—*Svo. Grammar*, p. 59.

But if this is true, as regards his or any other work, the reason of the fact, is far less inherent in the nature of the subject than many suppose. The science has often been unskillfully treated, and never been brought to that perfection of which it is susceptible ; and how can we expect children to de-

duce from a few particulars an accurate notion of general principles and their exceptions, where learned doctors have often faltered?

The chief argument of these inductive grammarians is founded on the principle, that children cannot be instructed by means of any words which they do not understand. This principle is certainly false; else they could never be instructed by words at all. For no child ever fully understands a word, the first time he hears or sees it; and it is rather by frequent repetition and use, than by attention to a dictionary, that the meaning of words in general is fixed in the mind. Hence people make use of many terms which they cannot well explain, just as they do of many things which they cannot well describe. The first perception we have of any word, or other thing, when presented to the ear or the eye, gives us some knowledge of it; and the difference between this knowledge and that which we call an understanding of the word or thing, is, for the most part, only in degree. Definitions, or explanations, are useful; but an understanding of words may be acquired without them, else no man could ever have made a dictionary.

The best instruction is that which ultimately gives the greatest facility and skill in practice; and the right use of words is best taught, by that process which the most effectually conquers inattention, and leaves the learner the least excuse for his ignorance. In the language of some men, there is a vividness, an energy, a power of expression, which penetrates even the soul of dulness, and leaves an impression both of words unknown and of sentiments unfelt before. Such men can teach; but he who kindly accommodates himself to ignorance, shall never be greatly instrumental in removing it.

V. Of the origin and character of the English grammars.

The first attempts to teach the grammar of our language appear to have been made chiefly in Latin; and often the two

languages were combined in one book, for the purpose of teaching, sometimes both together, and sometimes the one through the medium of the other. In Ward's preface to Lily's (or King Henry's) grammar, as published in 1793, it is said, "If we look back to the origin of our common Latin grammar, we shall find it was no hasty performance, nor the work of a single person ; but composed at different times by several eminent and learned men, till the whole was at length finished, and by the order of King Henry VIII. brought into that form in which it has ever since continued. The *English Introduction* was written by the reverend and learned Dr. John Colet, dean of St. Paul's, for the use of the school he had lately founded there ; and was dedicated by him to William Lily, the first high master of that school in the year 1510 ; for which reason it has usually gone by the name of Paul's Accidence. The substance of it remains the same, as at first ; though it has been much altered in the manner of expression, and sometimes the order, with other improvements. The *English Syntax* was the work of Lily, as appears by the title in the most ancient editions, which runs thus : *Gulielmi Lili Angli Rudimenta*. But it has been greatly improved since his time, both with regard to the method, and an enlargement of double the quantity."

Paul's Accidence is therefore probably the oldest English grammar now extant. In fact, however, it can hardly be called an English grammar ; because, though written in antique English, it was chiefly designed for the teaching of Latin. It begins thus : "In speech be these eight parts following : Noun, Pronoun, Verb, Participle, declined ; Adverb, Conjunction, Preposition, Interjection, undeclined." This is the old platform of the Latin grammarians ; which differs from that of the Greek grammars, only in having no Article, and in separating the Interjection from the class of Adverbs. It was followed by the author of the British grammar, by Priestley, by Buchanan, and others. Dr. Johnson professes to adopt the division, the order, and the terms, "of the common grammarians, without

inquiring whether a fitter distribution might not be found." But, in the Etymology of his grammar, he makes no enumeration of the parts of speech, and treats only of articles, nouns, adjectives, pronouns, and verbs; to which if we add the others, according to the common grammarians, or according to his own dictionary, the number will be ten. And this distribution, which was approved by Dr. Adam, and adopted by Dr. Ash, has been since very extensively followed; as may be seen in the grammars of Harrison, Staniford, Alden, Coar, Peirce, Comly, Jaudon, Ingersoll, Fisk, Greenleaf, Kirkham, Merchant, Bucke, Beck, Maunder, and many others. Dr. Lowth's distribution is the same, except that, in contradiction to the most general usage, he called the participle a verb, and thus made the number to be nine. He also has been followed by many; among whom are Bicknell, Burn, Lennie, Mennye, Murray, Allen, Guy, Churchill, Cobbett, David Blair, Davenport, Wilcox, Russell, Bacon, Lyon, Alger, Flint, Cooper, and Frost. But the last seven of these, and as many more in the preceding list, are confessedly mere modifiers of Murray; and perhaps, in such case, those are the most consistent who have deviated least from the authority they professed to follow.

Some seem to have supposed, that by reducing the number of the parts of speech, and of the rules for their construction, the study of grammar would be rendered more easy and profitable. But this, as would appear from the history of the science, is a mere retrogression towards the rudeness of its earlier stages. It is hardly worth while to dispute, whether there shall be nine parts of speech or ten; and perhaps enough has already been stated, to establish the expediency of assuming the latter number. Every word in the language must be included in some class, and nothing is gained by making the classes larger and less numerous. In all the artificial arrangements of science, distinctions are to be made according to the differences in things; and the simple question here is, what differences among words shall be at first regarded. To overlook, in our primary division, the difference between a verb

and a participle, is merely to reserve for a subdivision, or subsequent explanation, a class of words which most grammarians have recognized as a distinct sort in their original classification.

Several writers on English grammar, seem not to have determined in their own minds, how many parts of speech there ought to be. Among these are Webster, Dalton, Cardell, Green, and Cobb. Dr. Webster, in his *Philosophic Grammar*, made the parts of speech seven; to most of which he gave new names. In the sixth edition of his former grammar, (which, according to his own statement, he voluntarily suppressed, after reading Horne Tooke), he had reckoned only "six; nouns, articles, pronouns, adjectives, verbs, and abbreviations or particles." Dalton also in his grammar, which he dedicated to Horne Tooke, made the parts of speech six, but not the same six. He would have them to be, nouns, pronouns, verbs, adverbs, conjunctions, and prepositions. This writer, like Brightland, Tooke, Fisher, and some few others, insists on it that the articles are adjectives; and so has Dr. Webster fixed them in his late valuable, but not faultless, dictionaries. But Booth, in his "Introduction to an Analytical Dictionary of the English Language," returns them to the class of pronouns; from which he thinks it strange that they were ever separated!

What can be more idle, than for teachers to reject the common classification of words, and puzzle the heads of school-boys with speculations like these? And if we depart from the common scheme, where shall we stop? Some have taught that the parts of speech are only five; as did the latter stoics, whose classes, according to Harris, were these: articles, nouns appellative, nouns proper, verbs, and conjunctions. Others have made them four; as did Aristotle and the elder stoics, and, more recently, Brightland, Harris, and Fisher. Many of the ancients, Greeks, Hebrews, and Arabians, according to Quintilian, made them three. Plato, according to Harris, and the first inquirers into language, according to Horne Tooke, made

them two; nouns and verbs: which, Dalton says, "are the only parts essentially necessary for the communication of our thoughts." Those who know nothing about grammar, regard all words as of one class; and the ingenious reasoning of Cardell, being conducted without any fixed principles, arrives ultimately at the same conclusion. This writer, in his *Essay on Language*, reckons seven parts of speech; in his *New York grammar*, six; in his *Hartford grammar*, three, with three others subordinate; in his *Philadelphia grammar*, three only—nouns, adjectives, and verbs. Here he alleges, "The unerring plan of nature has established three classes of perceptions, and consequently three parts of speech."—*Phil. Gram.* p. 171.—While, in the same book, he affirms, that, "All other terms are but derivative forms and new applications of nouns."—p. 21.—But Neef, in his zeal for simplification, carries the anticlimax fairly off the brink; and declares, "In the grammar which will be the work of my pupils, there shall be found no nouns, no pronouns, no articles, no participles, no verbs, no prepositions, no conjunctions, no adverbs, no interjections, no gerunds, not even one single supine. Unmercifully shall they be banished from it."—*Method of Education*, p. 60.

But those writers on grammar, who do not even pretend to follow or respect the authority and custom of the learned, are, it would seem, not so properly to be reckoned grammarians, as antigrammarians. They are the zealots and overturners of literature, more apt to object than to teach, more ingenious to pull down than to build up; whose works are unworthy of serious refutation, and can serve no other useful purpose, than to make men of sense more firm in defence of practical instruction. The names of these I shall not, in this connexion, enumerate; nor needs there any apology for the omission, after what has been said of their character.

Among the earliest of the English grammarians, was Ben Johnson, the poet; who died in the year 1637, at the age of sixty-three. His grammar is still extant, being published in the several editions of his works. It is a meagre treatise, and

worthy of attention only as a matter of curiosity. Grammar is an unpoetical subject, and therefore not wisely treated, (as it once very generally was,) in verse. But every poet should be familiar with the art, because the formal principles of his own have always been considered as embraced in it. To its poets every language must needs be particularly indebted; because their composition, being in general more highly finished than prose, is supposed to present the language in its most agreeable form. In the preface to the poems of Edmund Waller published in 1690, the editor ventures to say, "He was, indeed, the parent of English verse, and the first that showed us our tongue had beauty and numbers in it. Our language owes more to him than the French does to Cardinal Richelieu and the whole academy. The tongue came into his hands a rough diamond: he polished it first; and to that degree, that all artists since him have admired the workmanship, without pretending to mend it."

William Walker, the preceptor of Sir Isaac Newton, a teacher and grammarian of extraordinary learning, who died in 1684, has left us a monument of his taste and critical skill, in his *Treatise of English Particles*—a work of great labor and merit, but useless to most people now-a-days, because it explains the English in Latin.

In 1706, Richard Johnson published an octavo volume of more than four hundred pages, entitled, "*Grammatical Commentaries; being an Apparatus to a New National Grammar: by way of animadversion upon the falsities, obscurities, redundancies, and defects of Lily's System now in use.*" This is a work of great acuteness, labor, and learning; and might be of signal use to any one who should undertake to prepare a new or improved Latin grammar: of which, in my opinion, we have yet urgent need. The English grammarian may also peruse it with advantage, if he has a good knowledge of Latin—and, without such knowledge, he must be ill prepared for his task. This work is spoken of and quoted by some of the early English grammarians; but the hopes of the writer

do not appear to have been realized. His book was not well calculated to supply the place of the common one; for the author thought it impracticable to make a new grammar suitable for boys, and embrace in it proofs sufficient to remove the prejudices of teachers in favor of the old. King Henry's edict in support of Lily, was yet in force, backed by the partiality which habit creates; and Johnson's learning, and labor, and zeal, were admired, and praised, and soon forgot.

The grammar of the English Tongue, published by John Brightland, and recommended by Steele, or the Tatler, under the fictitious name of Isaac Bickerstaff, Esq. of which I have the seventh edition, dated 1746, is a duodecimo volume of three hundred pages, a work of no inconsiderable merit and originality, and written in a style which has scarcely been surpassed by any English grammarian since. It, however, unwisely makes the parts of speech four, gives them new names, and rejects more of the old system than the schools seem to have been willing to give up. Hence it does not appear to have been very extensively adopted.

Whoever is curious to examine at large what has been published on this subject, and to qualify himself to judge accurately of the originality and comparative merits of the different grammars which are or have been used in English schools, may easily make a collection of one or two hundred, bearing different names. The treatises of the learned doctors, Harris, Lowth, Ash, Johnson, Priestley, Horne Tooke, Crombie, Coote, and Webster, owe their celebrity not so much to their intrinsic fitness for school instruction, as to the literary reputation of the writers. Harris's *Hermes* is not an English grammar, but a philosophical inquiry concerning universal grammar. To this work Lowth referred those students who might desire to pursue the subject beyond the limits of his little treatise, or "*Short Introduction*;" which, he says, "was calculated for the learner *even of the lowest class*." But these two authors, if taken together, supply no sufficient course of English grammar: the instructions of the one are too limited, and those of the other

are not specially directed to the subject. Ash's work is still more meagre than Lowth's; Johnson's is all comprised in fourteen pages, and allows to the syntax but ten short lines; Priestley contented himself with adding a brief appendix of critical notes, to a petty code of the most common elements, alleging that the language was "by no means ripe for a complete grammar." In point of time, both Ash and Priestley expressly claim priority to Lowth, for their first editions; but the former having allowed his work to be afterwards entitled an Introduction to Lowth's Introduction, and the latter having acknowledged his obligations to Lowth for some improvements in his third edition, grammarians have uniformly spoken of them as later writers. Horne Tooke, and his convert Dr. Webster, deviated so widely from the common track, that few have been disposed to follow them; but, in his recent publications, the latter seems to have come nearly back to the old system. The works of Crombie and Coote are more properly essays or dissertations, than elementary systems of grammar.

Dr. Beattie, who acquired great celebrity as a teacher, poet, philosopher, and logician, was well skilled in grammar; but he treated the subject only in critical disquisitions, and not in any distinct elementary work adapted to general use. Sheridan and Walker, being lexicographers, confined themselves chiefly to orthography and pronunciation. The learned doctors Blair and Campbell wrote on rhetoric, and not on the elementary parts of grammar. Of these, the latter is by far the more accurate writer. His philosophy of rhetoric is a very valuable treatise.

Some of the most respectable authors or compilers of more general systems for the use of schools, are, the writer of the British Grammar, Bicknell, Buchanan, Mennye, Murray, Fisher, Fenning, Grant, Allen, David Blair, Guy, and Churchill. To attempt any thing like a review or comparison of these, would protract this discourse beyond all reasonable bounds. Of mere abridgers and modifiers the number is so great, and the merit so little, that I will not trespass upon

your patience by any further mention of them or their works. Every intelligent man can surely discern the difference between originality of style, and innovation in doctrine—between a due regard to the opinions of others, and an actual usurpation of their text; and must be sensible, that, to improve the best of grammars, requires a degree of knowledge and skill which would enable a man to write in language of his own—to improve an inferior one would be a needless and foolish undertaking.

Whoever takes an accurate and comprehensive view of the history and present state of this branch of learning, though he may not conclude, with Dr. Priestley, that it is premature to attempt a complete grammar of the language, can scarcely forbear to coincide with Dr. Barrow, in the opinion that among all the treatises which have heretofore been popular no such grammar is found. In his *Essays* published in 1804, speaking of this subject, he says: "Some superfluities have been expunged, some mistakes have been rectified, and some obscurities have been cleared. Still, however, that all the grammars used in our different schools, public as well as private, are disgraced by errors or defects, is a complaint as just as it is frequent and loud."

What further improvement has recently been made, I leave to the unbiassed judgment of others. The public are interested in estimating it justly. The opinions expressed on this occasion, have been formed with candor, and offered with submission. If in any thing they are erroneous, there are those present who can detect their faults. In the language of an ancient master, I invite the correction of the candid. "*Nos quoque, quantumcunque diligentes, cùm a candidis tùm a lividis carpemur: a candidis interdum justè; quos oro, ut de erratis omnibus amicè me admoneant—erro nonnunquam quia homo sum.*"—*Despauter.*

LECTURE VII.

INFLUENCE OF

ACADEMIES AND HIGH SCHOOLS

ON

COMMON SCHOOLS.

BY WM. C. FOWLER.

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INFLUENCE OF ACADEMIES AND HIGH SCHOOLS

ON

COMMON SCHOOLS.

WHILE it shall remain true, that the great body of the community must depend on common schools for their stock of learning; it must likewise be true, that all the influences which are in operation, either to injure or promote the excellence of these numerous institutions, ought to be thoroughly examined by the friends of education. I shall therefore make no apology for introducing to your attention some remarks on *the influence of academies and high schools on the common schools of our country.*

In giving this form to the statement of the subject, assigned to me for examination, your committee probably intended to leave me at liberty to speak either on the influence that is actually exerted, or on the influence that ought to be exerted, by academies and high schools on common schools. That this influence is now great and salutary, and that it might be made more powerful and propitious, no one can doubt who has examined the relations of these classes of institutions.

It shall be my object to speak of what ought to be, though I may occasionally notice what is, their influence. In order to do this, it is necessary to call your attention to the standing they occupy, which is that of a middle grade between common schools on the one hand and colleges on the other. Besides

the general influence which every literary institution exerts upon every other, in elevating or depressing the standard of education in the community, they have a direct influence upon the latter, inasmuch as they furnish them with a large part of their students; and upon the former, since they supply them with a considerable number of teachers. It is through them that the pure and healthful principles of science and literature, that spring from those higher institutions, flow down to common schools, to water and refresh the lowest strata of our population. And it is likewise through them, for the most part, that the young aspiring spirits of our land, as they leave those lower institutions, must pass in their ascent to the colleges, the fountain of learning.

What then are some of the means, by which academies and high schools may be improved in their condition, and be made to exert a greater and more salutary influence than they now do?

The first means to be noticed is *the employment of permanent teachers*. This is now done to some extent, and with the most beneficial results; so that from actual experiment we can gather an argument in favor of adopting it as a general measure. There are men who have, for many years, been employed as teachers in institutions of this kind, with great reputation to themselves, and great advantage to the community, and the cause of learning.

But how is the business managed now for the most part? Why, in such a way that the office of instruction in an academy or high school, is only a resting place between collegiate and professional pursuits, in which the individual may collect resources for preparing himself for his future occupation. The trustees of some such institution, being in want of a teacher, make application at some college, and secure one, for six months or a year, who is recommended, of course, as high as his qualifications will bear. When arrived at the place of his destination, he finds himself among strangers, the subject of inquiry and remark, and of comparison, it may be, with his

predecessor. While he is thus the object of curiosity and investigation, both in school among his pupils, and abroad among their parents in the village, he, on the other hand, is obliged to study the peculiarity of his situation, the disposition and habits and prejudices of the community around him, and the individual and general character of his pupils; for unless he is well acquainted with these particulars, both in school and out of it, he cannot hope for much success either in instruction or discipline. He feels that he is an unprotected stranger, among, it may be, a worthy people, but who will be quick to perceive his mistakes.

Now, in such a situation, it is hardly possible that he should feel a deep interest either in the proficiency of his scholars, of whom he knows but little and whom he is soon to leave, or in the employment, which he regards only as a temporary occupation, to which he felt compelled by the necessity of his circumstances; and the time spent in it, he regards as wasted, so far as his preparation for a profession for life is concerned. Many, indeed most of the professions, whether mechanical or liberal, present to the novice much that is unattractive and even repulsive at first, but which, upon acquaintance with the practice and principles of those professions, become pleasing. Many a student at law, who found the study of that profession so dull and irksome that he was often at the point of abandoning it, found, as he advanced, new sources of interest constantly opening, until he became exceedingly attached to it, and distinguished for his skill in jurisprudence. But the difficulty with the teacher in the circumstances mentioned, is that he does not stay long enough in the employment to become acquainted with its various sources of interest, while he does stay long enough to become acquainted with whatever about it is dull, irksome and vexatious.

And more than this, if his mind is active and enterprising, his thoughts will be intent upon the studies of his future profession; and he would view it as a bad symptom in himself, and bespeaking a sluggish and coward heart, to form an at-

tachment to a business which could afford him neither the emolument, nor the respectability, nor the influence, of the other learned professions. He is looking forward to his release from teaching, as from a drudgery, when he may practise the healing art, or raise his voice in the court of justice, or in the temples of God. While he is in that state of mind, it is not possible that he should be very deeply interested in the occupation of teaching; and it is hardly possible that a man can be very successful in an employment in which he does not feel an interest.

Besides this want of interest, he does not spend time enough in the profession to become acquainted either with the science or the art of instruction. It is one thing to become acquainted with subjects in the abstract, and quite another thing to know them in their relations to the minds of others; and it is from confounding these two things, that the best scholars are supposed to be the best teachers.

What is education? In the largest sense of the word, it denotes all those influences, whether designed or casual, which are concerned in the formation of character. It may be considered as embracing all those moral causes that operate on the intellectual, the moral, and the corporeal faculties. In a more limited sense, it comprises all those direct means which are intended, by their influence, to rescue the young from the power of accident, and prepare them to be happy, useful and virtuous in the successive periods of their existence.

Now it is the duty of a teacher in an academy or high school, as of every other, that he should be acquainted with these means, and be able to select such as are appropriate, and apply them in the most efficacious manner. But this acquaintance with these means, and this selection and application, implies that he should not only know the objects which he is to present to the mind of the pupil, but also the powers of that pupil's mind and the various modes of approaching it. In other words, he should be thoroughly versed in the sciences and arts which he professes to teach. Next to this, he should

be well acquainted with the powers and habitudes of the human mind, to which these sciences and arts are to be communicated. And finally, he should be familiar with the best modes of fixing the principles and illustrations of those arts and sciences in the mind of the learner. He should be able to analyze that mind, discover its defects, cultivate all its powers in due proportion, and thus promote the perfection of the whole. If he finds him deficient in power of attention, he should be able to apply those appropriate studies, and that kind of discipline which will awaken and strengthen that faculty. If he finds him deficient in vigor and activity of imagination, he should know how to apply the appropriate remedy, by presenting to him the objects that are sublime and beautiful, whether found in nature, or in the walks of genius. If he finds him unable to follow a train of reasoning, he should know how to apply some of those exact sciences to remove this mental defect, which have been proved to be of such sovereign virtue in purifying the mental vision. Or if he finds him deficient in the power of observation, or in taste, or in moral feeling, or in the social affections, he should be acquainted with that training which will remove these defects.

Calling to mind, then, that education, as a science, consists in the classification of those principles, that are adapted to produce the highest degree of intellectual, moral and corporeal excellence, of which the individual is susceptible, and that, as an art, it consists in the proper application of these principles, and that the preceptor of an academy or high school has occasion to know and apply a large part of these principles; calling to mind, too, that a temporary teacher has neither motive nor time to become acquainted with education, either as a science or an art, we are prepared to perceive the utter incompetency of that class of instructors, who take up teaching as a temporary employment, without recurring to their frequent want of success.

Besides, even though he were properly versed in the business of instruction, he does not continue long enough to finish what

he begins. Human mind is the material upon which he is to operate ; and it is a long process, to be conducted with great care, to form that mind into a state of the greatest excellence of which it is susceptible. Taking the school only for a short period, while he is looking forward to the time when he shall complete as a hireling his day, he feels that it is utterly vain for him to enter upon an enlarged plan of education, which it would require some years to execute. He knows, too, that if he commences such a plan, his successor who is soon to follow him, may pursue a course entirely different, so that instead of endeavoring to form the minds of his pupils upon a high standard, he directs their attention chiefly to that degree of proficiency, which they can make while under his care, and which will enable them to pass a good examination at the close of his school. In this manner is he tempted to withdraw his attention from laying a broad and strong foundation of future excellence in their minds, and to fix it mainly upon those acquisitions that will immediately show to advantage.

Nor does he stay long enough to gain a personal influence in the community ; whereas the permanent teacher would gain the confidence of men around him, who, if he did his duty, would, by a course of observation, be convinced of his desire to promote the improvement of his pupils, and of his judiciousness in the selection of means for that purpose, and who would be ready to support him in his measures. Thus would he carry with him a moral strength, which his school would not be disposed to oppose. And if a scholar should be refractory, either in regard to his own studies or the general discipline of the school, he would find himself overborne by the voice of the community, who would rise up to support the teacher whom they had long found competent and faithful.

What would be the consequence, if the professions of law, physic and theology, were filled for the most part by those who should spend only the same length of time, which is now generally spent by those who are employed in the business of teaching in academies and high schools? Would they not utterly

fail of accomplishing the end for which they were established? Let, for instance, the student at law know that he will continue but one, two, or three years in that profession, and think you, would he be very anxious to become acquainted with its principles, its forms, and its pleadings? . Would he give days and nights to the study of precedents and statutes, and to a personal preparation to appear in courts of justice as the successful advocate of the injured? No; it is the feeling that his support, his reputation, his success in life, depend on his diligence, in his preparatory studies, and during the first years of his professional employment, that rouse him up to apply the whole force of his mind to qualify himself for his business. Let the same feeling prevail among those who are engaged in the business of instruction, and the effect would be to raise up a body of able, learned, and zealous teachers to take the charge of the academies and high schools of our country, who would stand upon a full equality with the members of other professions, in influence, learning, and gentlemanly accomplishments. If such a body of men existed, the intercourse they would naturally have with each other, and the organizations they would form for mutual improvement, would tend to keep alive their interests in their occupation, increase their professional qualifications, and thus produce the same beneficial effects upon them, which ministers derive from their associations and conventions; physicians from their medical faculties; and lawyers from their intercourse with each other at the bar.

And they should consist not merely of men who, from some defect, bodily or mental, cannot enter the other professions successfully; not merely of the sickly or the nervous who have not sufficient strength of body to make the requisite exertion, nor sufficient uniformity of feeling to preserve consistency of character; not merely of the cold and reserved, for such cannot awaken personal interests, nor of the eccentric in manners or in mind, for such will excite secret if not open ridicule and contempt. And I apprehend that many have taken a disgust with learning from not seeing such an illustration of it in their

teachers, as would either waken their admiration or command their respect ; just as there are those, who get a dislike to the christian religion, by getting their impression of it from witnessing the conduct and character of some of its professors. When the pupils see before them, every day, in their instructor some striking defects either in mental habits or personal manners, they are very apt to set them as the legitimate effects of learning ; and as they would deprecate these defects in their own character, they become disgusted with the learning from which they are supposed to proceed. A full proportion of healthy men, who can make the necessary effort, of men of well balanced minds, who will pursue a consistent course of ready social feelings ; who attract to themselves a strong personal interest in the minds of their pupils ; of good manners for them to copy into their own deportment,—should enter the profession. And there is motive enough for them to do so. For if a person of this character, as the instructor of an academy, shall feel the importance of the trust committed to him ; if he shall have a quick moral sensibility to his duty and a deep sense of his responsibility, called as he is to train up immortal beings to enjoy and communicate happiness in this world and the next ; if, standing in the place of a parent towards his pupil, he bears himself as a parent ; they in their turn, will, as they are scattered through the community in its various departments, return to him in respect and affection the debt of gratitude they owe him. He labored hard to form them into men, and in subsequent years he shall have his reward in seeing that he did not labor in vain. Whenever they meet him they will, in remembrance of the benefits received at his hands, rise up and call him blessed ; as Alexander felt towards Aristotle his tutor, no less affection than for his father, saying that from the one he received the blessing of life, and from the other the blessings of a good life.

Let men of this cast of character, thus strong in the confidence of the public of which they have been the benefactors ; thus comprehensive in their views of the subject of education ;

thus devoted permanently to their business ; be at the head of the several academies and high schools of our country, and the standard of education would be raised, general intelligence would pervade all classes of the people ; and from these institutions as so many radiating points, would then go forth an auspicious influence upon common schools, not only in this increase of intelligence in the community, but in furnishing able and accomplished teachers.

Another means, by which academies and high schools may be made to exert a greater and more salutary influence upon common schools, *is a longer attendance on the part of the pupils in those higher institutions.* This would give them a more thorough education, enable them to perceive the importance of improving the condition of common schools, and, whether as teachers or patrons, to devise plans for accomplishing that improvement.

Let the most accomplished scholars be employed as instructors, and those that are best qualified to gain the confidence of their pupils, and make them in love with learning, still, unless there is sufficient time to operate on their minds by a course of instruction and discipline, they will, to a large extent, labor in vain.

What is the present history of this subject ? Why, of those that attend these institutions, a part residing in the immediate vicinity, so that they can conveniently walk to them every day without changing their residence, attend them a longer period, though a considerable number of these ultimately resort to the college to complete their education. Another part, from a greater distance, attend them a year, or two years, pursuing the study of the Greek and Latin languages as preparatory to entering some college ; at which they are found to be poorly qualified for their standing, in consequence of having hurried over their studies so rapidly. Another and by far the largest part, taking the whole country through, are those who repair to the academy or high school, for one or two quarters,

and sometimes longer, to complete their education. It is of this latter class that I would speak more particularly.

It comprises those who have become acquainted with the common branches of school education; and who go to those higher institutions to add a knowledge of some of the higher branches, to polish off their learning, and prepare themselves to be teachers, or for some of the professions of active life. Having much to learn, and but little time, besides reviewing English grammar, arithmetic and geography, they wish to study natural philosophy, rhetoric, composition, logic, astronomy, perhaps surveying, and by all means chemistry, and it may be several other branches, and all this in the space of three or six months, notwithstanding there should be an exhibition in the mean time to employ the time and attention of the school. I do not mean that all these studies are often actually pursued during that short period, but that many make as near an approximation to it as they can; and the consequence is, that by running over so many studies in so short a time, they acquire the habit of studying in a superficial manner, so that what they gain in knowledge, they lose in mental discipline. They bring home with them a smattering of learning on these subjects, and from this inadequate and imperfect acquaintance, they teach others to think lightly of them. An acquaintance with a subject does not deserve the name of knowledge, unless that subject is understood in its bearing and relations, and unless the truths concerning it are thoroughly digested, and made to assimilate to the mind so as to make a part of its structure. Evidently this cannot be done in the short period that I have mentioned. For instance, let a lad of fourteen take up Jamieson's Rhetoric, and study it during a quarter so attentively as to be able to answer every question at a public examination, still he may know very little of the principles of fine writing, either in their application to his own composition, or in criticism on that of others. A large part of those, who have finished their education by this short course, are precisely in this situation. They know a mass of things, but nothing

distinctly, or adequately. They are acquainted with a few of the definitions, and a few of the leading facts, as mere matters of memory, but they have not risen to a perception of the beauties or uses of the subjects they have studied. And yet these are the persons better qualified than most others to teach in common schools, since most others have never had the advantage of attending in any higher institution a single day. I do not suppose that this description is universally correct in its application ; indeed there must be many exceptions. But some acquaintance with the condition of education in three of the New England States, warrants the belief that it is extensively a fair description. Indeed I am acquainted with some academies and high schools, to which individuals resort every autumn, just before the winter schools commence, that they may qualify themselves to be teachers, by an attendance of not more than three or four weeks, though they have never attended any similar institution before.

Now the importance of a longer attendance at the academy or high school may be seen from the following considerations.

Every scholar brings with him some bad intellectual habits, which require to be corrected. Considerable time must pass away, before the teacher, even though he is deeply versed in the science of mind, can understand what are the mental defects of his pupil. A longer time still must pass away, before he can make him, who is the subject of them, perceive what they are. A much longer time still must be spent, before the proper remedies can be applied, even though both use their most strenuous exertions for the purpose. On the supposition that permanent teachers are employed, it might be expected that they would be thoroughly versed in the philosophy of the human mind, especially as it develops the intellectual progress of the young ; and that they would be likewise familiarly acquainted with the means best adapted to promote this progress.

Besides this, the conscientious teacher feels himself bound to

bestow attention on the moral culture of his pupils ; and to this end he finds it necessary to study the moral powers of each individual, his associations, prejudices and affections, that he may know how to gain access to his heart, and place it under the influence of motives that will form it to virtue. Now in order to accomplish this, he must become intimate with him, and gain his confidence, and confidence we are told is a plant of slow growth. By a course of kindness, and by an affectionate deportment, he must convince him that he is sincerely desirous of promoting his happiness as an accountable and immortal being. To accomplish this, in any good degree, time is necessary. It is not the work of one month, or three months.

Besides this, the knowledge gained ought to be not a mere acquaintance with generalities, but with the particulars upon which the general truths are founded ; otherwise he will not be able himself to become deeply interested in the several subjects, whatever they are, because he will not perceive the beautiful relations of their principles ; nor will he, if called to teach them, be able to communicate adequate views concerning them to others, or awaken an interest in their minds. There is all the difference in the world between the knowledge of arithmetic which he has, who is only able mechanically to follow the rules laid down in some treatise, and in like manner to prove his work ; and the knowledge another has, who understands the relations of numbers, and who can demonstrate by algebra and geometry the rules themselves. There is a great difference between the knowledge of the first Eclogue of Virgil which he has, who barely understands the construction, and is able to parse every word correctly according to Adam's grammar ; and that which another has, who rises above the mere literal meaning to a perception of the touching beauties of sentiment and description in that exquisite poem. Many a one has studied the whole of Virgil so attentively, as to be able readily to construe any passage in it, who nevertheless entered so little into the spirit of the author, as to perceive scarcely a ray of beauty gleaming from its pages.

Now the difficulty with those, who complete their education at the academy or high school, is, that they do not stay there long enough to become acquainted with the particulars of the several subjects sufficiently to enter into the spirit of those subjects; and therefore cannot succeed, when called to teach others in a common school, in imparting to their minds, a very deep interest in those subjects. *Quod non habet dare non potest.*

The fact I am dwelling on corresponds with the custom of our country, whether it arises from the circumstance that time is more valuable here than elsewhere, or that we are more easily satisfied than some others, to spend but comparatively a short period in preparing for the several professions. We are inclined to take the shortest course to every thing; and in our arrangements in the several departments of life, we have almost as many labor-saving machines for the mind as for the body. In many of the mechanic arts, men are found, who, after a few months' practice, establish themselves in business successfully, as master workmen, competent to teach apprentices the rules and practice of their trade. And as the public suffers in using articles poorly manufactured by them, so it does likewise from the incompetency of teachers of common schools, who have spent so little time in their preparation for the business of instruction. In this occupation neither inspiration nor intuition can impart the requisite gratifications. Time is necessary to form the workman that needeth not to be ashamed.

The short stay of those of whom we have been speaking, at those higher seminaries, is an evil of great extent, and universally complained of by those who have had personal experience in their instruction. And the effect of it is very discouraging on the mind of the preceptor. He would wish to take them through a thorough course of study, and after keeping them a sufficient length of time, to send them forth into society, not as smatterers, but as well versed in every subject to which they have attended. He would wish to act upon a plan in forming the mind of every individual, and to have time to

finish what he begins. With what satisfaction would a sculptor commence working upon a block of marble, who knew that it would be taken from his hands before he had formed it into an image which should embody his high conceptions of manly dignity or female grace? When Phidias began the statue of Minerva for the Athenians, or that of Jupiter Olympus for the inhabitants of Elis, could he, with the knowledge that he should not be allowed sufficient time to complete them, have labored either with satisfaction or success? Could he, by the hurried labor of six months, have made the goddess of wisdom worthy of the "eye of Greece," or the king of gods and men, one of the seven wonders of the world? Neither can he, who is employed in the noble task of shaping the mind into a form of excellence, be expected to labor with satisfaction or success, if he is obliged to do what he does in a hurry, and to send his work from his hand, half done. If seven years, from fourteen to twenty one, are necessary to qualify one for the skillful practice of several of the mechanic arts, and for instructing others in those arts; surely a longer time, and a much longer time than is actually spent after the mind has come to maturity, should be occupied in preparation for the responsible and delicate task of shaping the minds of the young and imparting to them the rudiments of learning.

Another means by which academies and high schools may be made to exert a greater and more salutary influence upon common schools, *is to increase their number.*

On this point I have found it difficult to obtain all the information which, perhaps, would be requisite to carry conviction to the minds of others. In the case of colleges, as they are fewer in number, and more elevated in rank, and objects of a more general interest among the influential part of the community, it is easy to obtain every important fact in relation to their resources, the number of their students, the course of instruction and discipline pursued, and their actual influence on the community; more especially since so much discussion has taken place concerning them, sustained on the one side by those

who profess to be governed by the lights of experience, and on the other by those who would have us believe they have discovered some brighter lights. So that what with their annual catalogues, or circulars, or reports, or expositions, or other means they adopt for attracting the notice of the public ; their condition, standing, and adaptedness to the wants of the community, are generally known. And in the case of common schools too, from the circumstance that the great body of the people, while each individual is in early life, attend them ; and from the circumstance that in mature years a large part are present, in the school district to which they belong, at deliberations concerning the choice of a teacher, the salary that should be paid, and the time he should be employed ; and from the reports that are annually made in the legislatures of the several States ; it has happened that their number and condition can easily be ascertained by those who are in search of information.

But in the case of academies and high schools, the same causes not operating to create a general interest in their condition, or to diffuse information concerning their number officially, it is comparatively difficult to obtain many statistical facts. In some of the States there is one or more incorporated academy in every county, kept through the year. Besides these, in some of the larger towns there is a high school kept a part of the year ; and in some of the largest, several are constantly supported.

But these are not sufficient to supply the wants of the community at large ; though it may be true that some few places are abundantly furnished with them. To say nothing of other sections of our country, where the deficiency is more striking, in New England there are a great many flourishing towns, containing two or three thousand inhabitants, in which they do not support either of these institutions ; though they are well able to furnish a sufficient number of scholars, and pay for their tuition. Now the consequence is, that from not having one of these higher seminaries near them, only a very

small part of the youth acquire any thing more than a common school education. By establishing a high school in each one of these towns, were it for only six months in the year, besides the general improvement of the community, which of course would contribute to the improvement of common schools, it would remove from these institutions, the older youth who take up the attention of the teacher, and thus would enable him to apply his undivided exertions to the younger scholars. It not unfrequently happens, that in some of these towns there are schools during the winter season, containing from fifty to seventy scholars from four years old to twenty, all dependent on one man for instruction. The consequence is, that having so much to do, he can do nothing well. He neglects the younger scholars for the sake of the older, and to the older he can render very little assistance. In such a case, let there be a division of labor. Let one of those higher seminaries be established, to which let the elder scholars be transferred for the two-fold purpose of affording to themselves and the younger scholars an opportunity of receiving better instruction. Thus should we have three classes of benefits bestowed by the academy or high school, on common schools; the first in raising the standard of education in the community, and teaching the influential men in the several school districts to appreciate the importance of having competent instructors; the second in furnishing those of this character; and the third in relieving them of embarrassing numbers, or at least of those who take off the attention of the instructor from the younger scholars. Now in reply but one argument can be urged, and that is on the score of economy. It must be conceded then, that by increasing the number of these higher institutions, we must necessarily increase the expenses of education, especially to those who rely on a fund for support of common schools. The preceptor must be paid a higher salary; a more commodious building is necessary, for the erection of which there must be a liberal contribution; and to those who have several children to send, the expense of tuition is considerable. These considerations

will probably for a long time prevent the establishment of these higher seminaries in many places. They touch the pocket nerve, which unfortunately is but too sensitive, when the subject of increasing the expenses of education is proposed. It is difficult to make some men perceive that the subscription of one hundred dollars, for building an academy, and the additional expense of twenty dollars a year, for the tuition of their children, are profitable investments. The inconvenience is felt immediately, while the advantage is to be sought in some distant period, and is so diffused that it is difficult to collect it, so that the whole amount shall be seen. But could they become acquainted with the history of a town, like one that I could name, in which, about fifty years ago, an excellent teacher established a school of a higher order than a common school, which he kept with great success for about thirty years, could they carefully count over the number of distinguished men who received their education at that school, preparatory to entering college, and view the good which they have produced as statesmen, divines, or as private citizens; could they see how, during that space of time, an influence went forth from that school into every district in that town, that was visible in the general intelligence of the inhabitants, in the deep interest they manifested in the subject of education, and in furnishing them with competent teachers for their common schools;—they would be convinced of the importance of patronising institutions of this kind, even though this conviction should cost them some pecuniary inconvenience.

In a general system of education for our country, in which by a division of labor the most could be accomplished, academies and high schools might occupy the following places:

1. Let a college be established in every state in the Union; more than one, provided always that they should be well endowed.
2. Let academies be established in every shire town, and in some others, provided, as before, that they should be furnished with funds necessary to erect a suitable building, purchase apparatus, and with the tuition to support perma-

nent and well qualified teachers. Let every town, in those sections where the territory is divided into townships, containing two or three thousand inhabitants, provided they are not too much scattered, support a high school the whole or a part of the year, taught by temporary teachers if others could not be obtained; and these should be either graduates of the colleges, or those who have been thoroughly educated at the academies. 4. Then, in order, come common schools, supported in part by the state, and in part by the district, and taught by those who have been through a thorough course of instruction at the academy or high school. 5. And last follows the infant school, located in a population sufficiently dense, and supported by the enterprise and good judgment of intelligent females.

Another means by which academies and high schools may be made to exert a greater and more salutary influence upon common schools, *is the establishment in them of a department for qualifying teachers.*

It has indeed been said that the art of teaching is incommunicable in its nature, that it consists rather in a sort of tact with which some are gifted than any set of rules that can be taught to others. Now, in reply, all that need be said, is, that every teacher finds that he can, by consulting any intelligent man who has had experience in the business of teaching, derive rules from him, which he can with advantage follow both in discipline and instruction; and this implies that it is not an incommunicable art. The truth is, that neither instinct nor inspiration can be expected to qualify a man for the business of teaching, independently of study and experience. There is, indeed, considerable diversity in the modes which different teachers have adopted, who have been distinguished for their success. In the government of a school, some are successful by always employing the winning voice of kindness: as others are by appealing to the persuasion of the rod, in the very spirit of Dr. Bushby, when he roared out, as he was wont, "tuck him up, boys." In the use of motives some have successfully employed

the principle of emulation ; and others have relied on the more permanent, and, to some minds, the more powerful motive, found in the subjects themselves, when their beauties and attractions are unfolded. Some successful teachers use the analytic, and some the synthetic, mode of instruction. Now the principles that are concerned in the government of a school, in the motives addressed to them, and in the mode of introducing knowledge into the mind, constitute the science of teaching, when they are properly classified and stated. Rules legitimately founded on these principles, when they are practically applied, constitute the art of teaching. And there is the same reason why the science and the art of teaching should both be known, that there is why the principles and practice of any profession should be understood by him who engages in it.

Now, for imparting the requisite knowledge, two propositions have been made. The one is to establish seminaries for the sole purpose of making teachers of common schools competent to perform successfully the duties of their office, by instructing them in the science and art of their business. This undoubtedly would be the most thorough course, so far as it should be adopted ; and I can see no objection to it, excepting the single one, that while the teachers of common schools shall receive a less salary than industrious mechanics, they can hardly be expected to put themselves to the additional expense of attending an institution of this kind. A large proportion of the teachers of common schools in our country, are farmers who employ themselves during the winter in teaching, because at that season they have little or nothing that they can do besides. With the same qualifications they can afford to teach school at a cheaper rate than those who depend on this business as their only means of subsistence ; and thus it happens that the many who are temporary teachers, and the few who are permanent, have not a sufficient motive to repair, in any considerable numbers, to schools of this kind. Those who should attend would undoubtedly become better acquainted than others with the science and art of instruction, and it is therefore exceedingly desirable

to have as many of these schools established as can be supported ; and as many supported as would furnish a teacher for every common school in the United States.

But however desirable this may be, it must for the present be considered as hopeless ; and the better, because the more feasible plan, would be to have a class a part or the whole of the year, in every academy, who should pursue a specified course of study to qualify themselves for the profession of teaching. In this mode there would be less expense of travel and time, and the attention of the community would be turned to the preparation of teachers for their employment as a subject of great importance. The other scholars in the academy would become more or less acquainted with the system, so that they could judge of the qualifications of teachers, and if need be, could with comparative ease qualify themselves at some future time for the business of teaching.

And here I would say that there should be a distinct and definite course of study marked out by the trustees of every incorporated academy ; and an acquaintance with a certain part of this course should be considered as a necessary prerequisite for admittance to the class that are qualifying themselves to be teachers. After they had entered this class, besides making them familiarly acquainted with all the branches taught in common schools, the preceptor should give them familiar lectures on the business of instruction and discipline ; should afford to each one an opportunity of actually giving instruction to the class to which he belongs, or to a younger one. He should turn their attention to all the principal modes of teaching, and to the influence of the different motives employed, and urge them to read valuable treatises on the subject of education, introduce to their notice all the improvement in manuals and furnish philosophical criticisms on those in use. This would prevent, in some degree, the inconsiderate changes that are sometimes made in manuals, and, at the same time, would take the selection of books out of the hands of booksellers and publishers, who have a pecuniary interest in the sale of cer-

tain books and the exclusion of others, and place it in the hands of the intelligent and disinterested part of the community. It is owing to the want of some such course as this, that certain evils prevail to some extent in the books used in common schools, as for instance the awkward and obsolete spelling of Johnson. The preceptor, moreover, by dwelling on the importance and dignity of the profession, which aims to form the minds of the young for high intellectual enjoyment in the performance of the various duties they owe to their friends, their country, and their God, could hardly fail to waken up an enthusiasm on this subject that would lead many of the finest minds, while they were engaged in improving themselves, to consecrate their talents to imparting instruction to others. In this manner a body of accomplished, earnest, and devoted teachers would go forth from academies and high schools to take possession of the length and breadth of the land, that they might diffuse over it the light of learning, the cheering influence of correct moral sentiments, and the warmth of piety. And on this subject we have much to hope.

Since the revival of literature in the 14th century, there probably never was a time when the subject of education attracted a more deep and universal attention than it does at the present. In Great Britain, to say nothing of continental Europe, and in our country, the philosophic statesman, who bestows his thoughts and his efforts on the great objects of political economy, that he may thus promote the prospects and permanent welfare of his country; the man of letters, who endeavors, through the medium of the press, to refine and elevate the public taste; the man of enlightened piety, who labors to prepare men for heaven,—unite in considering education as the grand instrument of promoting the weal or wo of human kind; while those who look only at their own immediate benefit, or that of their children, are disposed, many of them, to consider it when properly conducted as the certain means of personal success in life.

The importance of education may be seen not only in its direct influence in elevating and improving the character of him who enjoys it, but likewise in its various bearings upon government and religion. We may talk as much as we please of a government of equal laws, which secures the welfare of the whole with the least possible encroachment on the liberty of the individual ; it will still be true that despotism will take its place, unless those who are governed are educated to understand their rights and the means of maintaining them.

We may talk as much as we please of the efficacy that religion gives to the laws, by ensuring their conscientious execution, while it diffuses through the community a healthful moral feeling ; still it will be true that, without the influence of education, it will be converted into the wild dreams of enthusiasm or the sullen stupor of bigotry. Of the pillar upon which the structure of our national happiness rests, general intelligence is the pedestal, religion the shaft, and government the capital. Let either of these be shaken from its place, and the fabric falls.

LECTURE VIII.

ON

NATURAL HISTORY,

AS A BRANCH OF

COMMON EDUCATION.

BY CLEMENT DURGIN.

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 N. 5TH ST. NEW YORK, N. Y.

NATURAL HISTORY.

THE object of this lecture is to invite your attention to the subject of Natural History, and to urge its claims to be introduced as a branch of common education. In discharging my duty on this occasion, it will not be expected that I should treat the subject as if it were new to the members of this Institute. It gives me pleasure to believe, that I am addressing those who duly appreciate the importance of this study, and who are disposed to give an indulgent consideration to the expediency of adding it to the branches already taught in common schools. Whatever shall dignify the profession of a teacher by the importance of his instruction, or promote his usefulness by enabling him to extend his labors to those subjects, which are calculated to give him an honorable rank in society, I feel assured, will meet with your respectful attention.

In stating some of the reasons why Natural History should receive the particular attention of schools, and in sketching a few of the outlines of the study, and the advantages to be derived from it, I shall omit those minute details, upon which, more particularly, depend its charm and intrinsic value.

Free schools are among the most valuable of civil institutions, and should be ever under the watchful eye and guardian care of every friend of virtue and civil liberty; and so far as this association can extend its influence or lend its aid, it ought to see that the republic of letters receive no harm.

It is certainly a noble purpose of this Institute to discover and apply the best methods of teaching the various branches of education ; and I speak with due deference, when I say, a higher motive does not exist ; the attention of man cannot be awakened to a more important object, than that of making himself and others happier, by understanding and teaching the principles of truth and duty. What then is the education which we should promote ? In its most extensive acceptation, it comprehends whatever may have any good influence in developing the mind, by giving direction to thought or bias to motives of action. To lead infancy in the path of duty, to give direction to an immortal spirit, and teach it to aspire by well doing, to the rewards of virtue, is the first step of instruction. To youth, education imparts that knowledge whose ways are usefulness and honor, and by due restraint and subordination, makes individual to intertwine with public good in a just observance of laws, comprehending the path of duty. To manhood, "it leads him to reflect on the ties that unite him with friends, with kindred, and with the great family of mankind, and makes his bosom glow with social tenderness ; it confirms the emotions of sympathy into habitual benevolence, imparts to him the elating delight of rejoicing with those who rejoice, and if his means are not always adequate to the suggestions of his charity, soothes him at last with the melancholy pleasure of weeping with those who weep." To age, it gives consolation, by remembrance of the past and anticipation of the future. Wisdom is drawn from experience, to give constancy to virtue ; and amidst all the vicissitudes of life, it enables him to repose unshaken confidence in that goodness, which, by the arrangement of the universe, constantly incites him to perpetual progress in excellence and felicity. Education is the growth and improvement of the mind. *Its great object is immediate or prospective happiness.* That then is the best education, which secures to the individual and to the world the greatest amount of permanent happiness ; and that the best

system, which most effectually accomplishes this grand design. How far this is accomplished by the present system of education is not easily determined ; but that it fails in many important considerations, cannot admit of a doubt.

It is feared, that, by a great majority, a wrong estimate is made of education. Is it not generally considered as a *means* which must be employed to accomplish *some other purpose*, and consequently made subservient and secondary to the employments of life ? Is it not considered as being contained in books, and a certain routine of studies, which, when gone through with, is believed to be accomplished, and consequently laid by, to be used as interest may suggest or circumstances demand ? *Education comprehends all the improvement of the mind, from the cradle to the grave.* Every man is what education has made him, whether he has drunk deep at the Pierian spring, or sipped at the humblest fountain. The philosopher, whose comprehensive mind can scan the universe, and read and interpret the phenomena of nature ; whose heaven-aspiring spirit can soar beyond the boundaries of time, indulge in the anticipation of immortality, and discern in the past, the present, and the future, the all-pervading spirit of benevolence, is equally the child of education, with him, whose soul proud science never taught to feel its wants, and know how little may be known. If it is education, then, whose power metes out condition, and happiness or misery, what profession should rank so honorably as that which controls and directs it ; and upon whom rest such high responsibilities, as upon those who are intrusted with the charge of forming the human mind !

It is often a cause of deep regret, that education answers so imperfectly its design ; and I believe that all experienced teachers will concur with me, that much of our labor is apparently thrown away ; that much of our exertion is baffled and counteracted by circumstances beyond our control : and it is very problematical, whether all the means and pliancies of

this inventive generation, shall add much to the permanent advancement of mental cultivation.

The experience of centuries is before us upon the important subject of education, and yet no age perhaps has exhibited such excitement, change, and experiment as this. These are good indications, as they exhibit the exertions of an immortal nature, striving to discover and apply a greater good than has yet been spread over the face of society ; but it is no less important to know when to rest satisfied with experiment, and to learn how best may be applied the materials already at our command. It may be well for those, whose duty it is to investigate the cause of our grievance, to examine with a scrutinizing suspicion into many of the boasted improvements of the day ; to see if there is not more show than substance. Should it be discovered, that many of the facilities for teaching are but *troublesome conveniences*, and that many books now in use are so far simplified as to be destitute of nutrition, a remedy can easily be suggested. It may be, that hereafter it will be ascertained, that nature never intended a child should learn to walk on crutches, or think by a machine. This age stands preeminent for the application of power to the movement of locomotive engines ; and in its all comprehensive sphere this power kindly lends us aid to propel the mental energies, saving to the community an immense amount of painful labor and hard thinking ; and so vivid is the prospect in the vision of some romantic pioneers, that their advancement before their less zealous brethren, already enables them to descry a railroad cut to the highest pinnacle of the hill of science, along whose flower-strown path, the velvet cushion of a steam carriage shall bear the sons and daughters of literary distinction, with an ease and rapidity truly astonishing. It is ardently expected, that it will soon be as easy to acquire eminence in this country as it is to inherit it in any part of Europe.

It is not for me to predict what will be the result of such sanguine expectations. I acknowledge no man my superior in

ardent wishes for improvement in systems of education ; but if I may be permitted to give an opinion, I would say, that whatever shall attempt to relieve the mind from labor, necessary to its growth, or by explanation and illustration to supersede the necessity of vigorous thought and diligent application, must be injurious to the cause of sound learning, and can foretoken nothing more inviting, than a barren intellect and an empty brain.

A part of the evils, under which education at present labors is undoubtedly attributable to the system itself. It is often a subject of remark, that so little of school education is carried into the actual business of life ; that what was considered dry and uninteresting at school, is soon forgotten after the pupil is disengaged from the thralldom of early years, and takes his place in the community, where his own powers of mind are, for the first time, brought into exercise. Nor is this a source of wonder. I ask any instructor to call to mind the present routine of common education, and tell me how much of it is calculated to develope the mind. We will not enter upon the disputed point whether all ideas, or the elements of knowledge, are implanted in the mind through the medium of the senses acting upon external objects, or whether they are innate in the mind, and evolved or brought out by the exercises of the senses. One thing appears to be certain ; we were born with certain instincts and feelings, which are the result of our organization, and we are endowed with the powers of perception and memory ; and from these must proceed all our knowledge. But we would inquire how much of present instruction is made to retain its influence in after life. Are we told that we have only time to learn what is absolutely useful, to enable us to discharge our several duties, and that all knowledge which cannot be brought to aid us in our daily labors to obtain a livelihood is useless, its acquisition is time misspent ? We cannot envy such an one the pleasure of so humble an estimate of the human mind or the value of education. It is true, we

have only time to learn and practise what is useful. What then is useful knowledge? What should be taught? That is useful knowledge, which makes us wiser and better—that should be taught and practised, which will secure the greatest amount of permanent happiness. By the condition of our being, it becomes necessary to learn first what may contribute to our immediate wants; but our wants are always immediate. To say we should teach what ought to be practised in after life, conveys a complete idea of the term education.

The usual branches of a common education, are taught for their indispensable utility. We make complaint of the amount of knowledge acquired, and the want of thoroughness; and when it is remembered, that a part or all of the first twelve or fourteen years of life, is spent at school, it must be confessed that less is accomplished than might reasonably be expected. In this time, a small capital of ideas ought to be accumulated, to enable the individual to live without becoming entirely dependent on others; at least, he ought to be enabled to understand what shall be of daily occurrence to him. It is the fortunate lot of a great majority of mankind, to be obliged to labour for the means of existence. They consequently have little time for study; they acquire ideas slowly from books, and trust to the passing events of the day for the topics of thought and conversation. A vast amount of useless thought is thus expended on low and trivial subjects; and social intercourse, which might be made subservient to the noblest purposes of our being, improvement and happiness, is too often degraded by folly, or poisoned by intemperance. But what shall prevent the mind's abasement? At that interesting age when the intellect begins to assume its manly features, and needs, more than ever, something to nourish and direct it, the feeble stock of early acquisition is insufficient to its support, and the character then becomes the child of accident and the sport of chance. There is evidently too little in common education,

for which, in after life, memory will pay her tribute to early instruction.

To obviate this misfortune, it is proposed to interpret to youth the rudiments of that great book, the works of nature ; to enable them to read and understand the ceaseless wonders and boundless perfections there displayed. It is not desirable that the study of Natural History should be introduced to the exclusion of any branch of common education now taught ; all that is desirable is, that it be permitted to take its appropriate rank, and receive its merited attention. The natural sciences are neglected, to the great injury of mankind, in what most intimately concerns them, their happiness. Happiness, it should be remembered, is not only the great object of education, but of life itself. Whatever augments this, is the soul's great good ; not that effervescence of feeling, which agitates a giddy mind, and, like the mists of the morning, is soon to pass away, and leave behind its damp and chillness ; but an inwoven, deeply rooted enjoyment, rising from the fountains where reason and philosophy, nature and art combine and mingle all their sweets. In that hard doom which bound man to daily toil for his subsistence on the hostile earth, we behold the tokens of mercy, that by the constitution of his nature, he is enabled to convert all the objects around him into sources of pleasure. It is this capacity to see and enjoy beauties in the works of creation, that we would cultivate, making all things answer the double purpose of supplying our wants, and administering to our enjoyment.

Contemplate for a moment the condition of a human being, and the means ordained for his existence. His feeble frame is invigorated by the life-giving air ; his eyes brighten to look upon and enjoy a pleasant world, and his ears learn to distinguish the varieties of sound. Nature has placed him in a world of organized things, all of which lend their influence to develop his immortal spirit. His senses were given him to be the ministers of thought and feeling, between the world

within and the world without. It is the office of education to regulate this influence, to determine whether this child shall be the gloomy savage, or the enlightened philosopher.

It has never entered the imagination of man to conceive of the amount of rational enjoyment there is in the storehouse of nature, unless he has enlisted his feelings in her cause. Books may be read and be forgotten. The avocations of after life may leave us no time for their perusal, but the volume of nature is always open before us; in every walk, in every scene of duty, its voice may be heard to instruct and delight us. Escape her influence you cannot. "It raineth on the just and the unjust." The vegetable kingdom in its verdant beauties, the insect tribes with all their varying wonders, the birds, that luxury of nature, and all the animals that people earth and sea, are, to the natural philosopher, objects of interest. He can see design and perfection in the insect that sometimes annoys him; in the bird that sings or preys upon its brother; and in the animals that administer to his support, or plunder his subsistence: even in the inanimate earth, he finds the materials of happiness; and, when he has hewn his granite tomb, it adds one consolation to his common allotment, to reflect, that, while his spirit shall dwell with the First Cause, his dust reposes in the first monument of earth's existence.

Natural History, in its full extent, embraces the name and description of every object of the material world, together with their changes and phenomena. Although every part of nature is interesting, it cannot be expected that a familiar acquaintance with all, can be the favored lot of many. Life, exclusively devoted to this study, would fail to comprehend it; and after the genius of ages has lent its light to discover and record the wonders of creation, much remains for future industry to accomplish. It is not, however, in the hope of adding any thing new, to the long catalogue of natural objects, that I now urge its claims to the attention of the teacher; it is indeed hoped, that discovery has not yet furled her wings forever, but that

sons and daughters are to be born to science in this favored land ; I would not, however, urge further conquest ; I only ask for the cultivation of what we already possess. The extent of Natural History might be considered as an insurmountable difficulty to its introduction, as a branch of common education. If you look at it in books, it is indeed forbidding. Its long catalogue of names is so appalling, that few have the courage to attack, and still fewer the good fortune to conquer. Yet these are no objections to it as a study, much less to its value or expediency.

The object of common instruction is to impart important and general ideas ; to explain the principles upon which knowledge is founded, as landmarks to guide the pupil in the onward path of life. However much it is to be regretted, that the great mass of mankind receive but a scanty education, considering the circumstances under which they live, it is no reason why the fountains of knowledge should be locked up, lest

“ Shallow draughts intoxicate the brain.”

Knowledge, however little, is valuable, provided it be useful, and made subservient to life, and life's great aim. In the time usually devoted to common education, nothing more is attempted than the simple rudiments of the branches taught ; so in Natural History, we can expect only to introduce the pupil into that sublime temple, paved with gems, decorated and perfumed with flowers, and made radiant with life and animation.

On this extensive subject I am permitted to speak of but few of its prominent features. In teaching, I would begin where nature intended, at home, and explain the objects immediately around us. In this department, books for the pupil, and scientific arrangement with the teacher, are minor considerations. The object is to teach a knowledge of *things* rather

than of *words* ; to study nature in her own livery, rather than in the drapery of art.

In Mineralogy, the names and uses of the different substances are easily remembered by the pupil, and as they are always before him, an acquaintance with them opens an extensive field of rational enjoyment, which will fill with pleasure many a vacant hour in after life. One of the most obvious advantages arising from the study of the natural sciences, is the habit of discrimination which it teaches. To learn to distinguish, by a careful comparison, the less obvious differences in specimens apparently the same ; to comprehend at a glance the distinguishing features of others ; to observe the various and beautifully formed crystals, and to remember the different purposes to which the minerals are appropriated in the arts and economy of life, all combine to give that power of discrimination, which constitutes, to a very considerable extent, mental superiority. Another advantage of great importance, derived from this study, is that it can be understood by the pupil. I wish I could with equal truth bestow this high encomium upon all the subjects now employed to develop the youthful mind. Nature's teachings are always simple, though sometimes sublime ; and the child, who has been led to admire the sparkling gems found upon the surface of the earth, may at a riper age be taught to comprehend the more sublime features of nature, which modern Geology has revealed. In the composition and structure of the earth, there is a grandeur displayed, that almost mocks the creative imagination. The extensive vale, with its rich, luxuriant mould ; the rocky hill, shorn of its verdant glories ; and the towering mountains,

“ Whose vast walls
Have pinnacled in clouds their snowy scalps,
And throned eternity in icy halls
Of cold sublimity ”—

are the displays of that power, whose agents have broken down

the solid barriers of earth, and scattered the surface with their fragments—have scooped out the beds of lakes and rivers, and in sand and stone marked the boundaries of seas and oceans. In the effects of earthquakes and volcanoes, we catch a glimpse of the hidden energies of nature ; and in each recording stratum of earth's progressive state, we read the memorials of other times and other beings, when the deep foundations were broken up, and in oblivion were buried the countless races of former ages, whose fossil relics are all that now remain, to tell of their existence or the catastrophe which overwhelmed them.

The science of Chemistry cannot be too strongly recommended as a branch of common education, as it is more immediately connected with our welfare and happiness than most other subjects. It acquaints us with the nature of the material world, the influences of different substances upon each other and upon ourselves, and unfolds the great laws of nature, by which the ceaseless changes of organization and decomposition are effected.

The knowledge derived from the natural sciences is not confined to the objects of nature, but it sheds its light on every other department of learning. Chemistry teaches, that changes, by combustion or decomposition, are not a loss of matter, but a different state of being. It coincides with revelation in proclaiming the immortality of the soul, in the attested fact, that nothing can be annihilated ; while to Geology is reserved the honor of confirming, from nature, the doctrine of miracles. Geology declares that this earth was long inhabited by countless races of animals, before it became the abode of man. Comparative Anatomy establishes the fact, that man could not have ascended, by gradual improvement, from any other race of animals. His introduction into this world must then have required an absolute creation : and this was a miracle, an event which the established laws of nature could not have

accomplished. If the doctrine be proved in one instance, it will obtain in all.

Living as we do amidst the wonders of creation, where all seem to subsist by a miraculous power, nothing delights us more than the various aspects, which the ceaseless changes of the year produce. In spring, after having escaped the long confinement of winter, with what delight do we hail each springing blade or opening flower; our hearts expand with the vernal blossom; and our feelings awake to livelier emotions, as we behold the daily progress of vegetation, dressing the landscape in smiles and loveliness. Among all created beings, it is alone the high prerogative of man, to comprehend and enjoy the works of nature. The influence arising from rural scenes is kindly calculated to elevate and refine our feelings, and to impart that sweet and amiable disposition, which is at once the most valuable and endearing accomplishment of our nature. As "an undevout astronomer is mad," so an unamiable lover of nature is an unnatural monster.

" All natural objects have
An echo in the heart. This flesh doth thrill,
And has connexion by some unseen chain,
With its original source and kindred substance.
The mighty forest, the proud tides of ocean,
Sky-clearing hills, and, in the vast of air,
The starry constellations, and the sun,
Parent of life exhaustless—these maintain
With the mysterious and breathing mould,
A coexistence and community."

Perhaps no part of nature offers more pleasing attractions than the vegetable kingdom. The study of Botany is eminently calculated to awaken genius, to correct the taste, and to give a glow and richness to the imagination. It is certainly to be lamented, that this useful and highly ornamental branch of knowledge is so much neglected. Whether this arises from the apparent difficulties in the science, or the im-

perfect mode of teaching it, cannot be easily determined; certain it is, that it is worthy the attention of all rational beings, who hope to spend a life of happiness amidst the budding glories of a spring, the ripening summer, and the bounties of the autumnal year.

In teaching this subject to children, little dependence should be placed on books, the hard names there employed will tend to wean rather than to engage the attention. Familiar lectures upon the objects themselves, combine most of the advantages desirable, and if a judicious management be preserved, the pupil will soon find himself possessed of those leading facts which will enable him to understand the changes, and interpret the phenomena of the vegetable kingdom. A strict attention to method and scientific arrangement, cannot be too urgently recommended to those who wish to become proficient in the study; but care should be had, that too much be not undertaken in the case now under consideration. It must be remembered that, of the time devoted to a common education, very little can be given to the study of nature; that little should be given to nature herself, and to nature at home. The study of rare and curious plants, exotics, is indeed pleasant to those who have leisure; but our object now is to make the pupil acquainted with that part of the vegetable kingdom, immediately around him, amidst which he is probably destined to spend his life: not to teach him the beauties of the tropical regions, and leave him ignorant of those of his home. Instances are not uncommon, where individuals can repeat all the names of green-house plants, but know not the name or nature of those, that spring up by their daily path, and which, if far brought, would be considered equally beautiful with their more favored sisters. This disposition to exile the mind from home is among the leading propensities of our nature. We send our thoughts and sympathies abroad, and expend them on useless subjects, when they should be employed at home; nor is this peculiar to one subject; instances are too frequent

where men can read Latin and Greek fluently and correctly, who can neither spell, write, or read their native tongue, accurately.

Among the most interesting parts of plants are flowers. Their endless varieties of form, color, and odors, never fail to excite our admiration of that wonderful display of Infinite perfection, exhibited in their matchless hues and inimitable structure.

“ He, who hath no love of *flowers* in his soul,
Is fit for treasons, stratagems, and spoils.”

The vacant moments of life are often beguiled of their pains by these emblems of purity and innocence. They please us by their beauty, they please us by their fragrance—even their evanescence pleases us, and we hail their return with a joy which would be unknown, were they the abiding objects of creation. The pleasure derived from flowers is greatly enhanced by a knowledge of their parts, and the important functions they perform in the economy of nature; the instructed eye will perceive beauties which must remain hidden to the untaught vision.

A few general ideas will comprehend the folious system of plants, in which may be found much useful information—such as the general structure of the leaves, and the purposes which they answer in the growth of the vegetable—that by them the sap is elaborated, in the same manner as the blood in the lungs of animals, by the absorption and decomposition of air—the means employed by nature to renew them the following year, by buds in the temperate and cold regions, but by another process in the torrid zone. Vegetable physiology, including the structure and growth of plants, is itself an exceedingly interesting subject, easily taught and comprehended.

One of the noblest occupations, which engages the active powers of man, is agriculture. As it is the support of all others, so should it rank first in point of dignity. Its claims to

superiority over manufactures and commerce, demand that the man should not sink below his profession. As a large proportion of those, who receive a common education, will become tillers of the earth, we know of no way in which they could be more efficiently benefited, than by teaching them a knowledge of the soils and their productions, amidst which they are to employ their labor and spend their days. Of scientific agriculture, our country has much to learn, before the husbandman can reap the full reward of his exertions. Horticulture is beginning to strew its flowers and fruits along the path of healthful industry, giving fragrance and richness to the beauties of nature. It is ardently hoped that an improvement in education will do something to free agriculture from its abasement, caused by the habits, prejudices, and want of information in too many of its worthy followers.

It is an old saying that nothing was made in vain; yet what a vast number of living creatures there are, as well as of plants, of whose importance or connexion in the economy of nature, we are ignorant. How much yet remains to be accomplished, before man can become the interpreter of nature, to which his rank entitles him, and which his improvement demands.

The condition of our being makes it incumbent upon us to understand the nature of that system of things, of which, we form a part, and from which we derive our subsistence. To know ourselves, would comprehend a knowledge of almost every thing else; but no knowledge is more interesting or more useful, than that which is derived from the study of nature. Our existence is as intimately connected with the elements around us, as is that of a plant; and it is pleasing to know how we live and move. This inquiry would show us the importance of the study now under consideration. How intimately connected is the continuance of life with air and heat; and these alone, in their various phenomena, open a wide field for observation. From the earth, we draw most of the solid mate-

rials which enable us to hold dominion over nature. A knowledge of these, and their application, inwoven as they are into every department of civilized society, is no less useful than interesting. We derive our food from the earth ; but are unable to subsist upon its crude materials. Established then, between us and the fountain of our existence, is the great laboratory of animal life, the vegetable kingdom, which opens to us a field of boundless extent and variety. From the vegetable kingdom we derive much of our food and clothing. It furnishes the softer materials for building our houses and machines, and enables us to construct the noble ship, and navigate it to all parts of the earth, thereby extending the boundaries of commerce and civilization, giving to the less, the luxuries of the more favored climes, and making the nations of the earth one great community. Our interest, our welfare, and our happiness, all combine to invite and urge us to study this delightful part of creation.

A stronger claim, arising from sympathy, is urged upon our attention by the countless races of animals, which people the air, the earth, and the ocean. In viewing the forms and habits of animals, we are led to bestow on them a certain capacity, or intellect, some traits of which are exhibited by them in a wonderful degree. We imagine them susceptible of pleasure and pain, and endowed with the nobler qualities of our nature, such as love, courage, and gratitude. These, together with the multiplied relations, which animals hold in the grand economy of nature, among themselves, and to us, always come home with a pleasing interest to all minds, in all ages. No study is better calculated to unite the twofold purpose of amusement and instruction than this. What an immense number of human beings are supported on the flesh of animals. Millions are daily sacrificed for food and clothing. Almost every animal is taken for food in some parts of the earth ; while feathers, fur, wool, silk, and skins, are converted into articles of dress. Oil, spermaceti, wax, tallow, afford us light ; and bone, ivory, pearl, shell, horn,

whalebone, hair, bristles, are all made to administer to our wealth and happiness. This fact that animals supply our wants to such an extent, ought to excite our interest in their history. The favorite mistress of the Indian hunter is robed in less spoils of animals, than the votary of taste and fashion in refined society. The ox and the kid have yielded up their lives to furnish their skins for a lady's shoes. The whale sent its oil from the arctic regions to dress the leather, and the swine lent its lard and bristles, and the bee its wax, to assist in the manufactory. For her dress, silkworms, in multitudes have toiled and died. The sheep silently relinquished her fleece, to form the outer robe, on whose borders the marten, the otter, the ermine, or the sable, holds a conspicuous place. From the ears are suspended, curiously wrought, the mother of pearl, brought from the depths of the tropical seas; the turtle has been robbed of its shell, and the cow of her horns, to be transferred as ornaments to the lady's head, while the rich plume of feathers, and the ivory fan show us, that the ostrich and the elephant have not escaped this general destruction. The representatives of twenty different animals, from the four quarters of the globe, frequently unite in a lady's wardrobe. In some instances, whole tribes of men subsist almost entirely on a few species of animals. The Esquimaux and the Laplanders turn the reindeer to a better account than Boniface did his ale. They not only eat and drink and sleep upon this useful animal, but convert it into many other purposes in their simple economy.

Some of the domestic quadrupeds are the faithful companions of man in every part of the globe, rewarding his care and protection by their clothing, their milk, and their flesh. It is interesting to learn the changes which all domestic creatures undergo by cultivation; and, in an agricultural point of view, this knowledge is highly useful. Some scientific knowledge of animals, their form, structure, disposition, and modes of living, should be regarded as a valuable portion of every education. The

number of objects in Natural History, seem to point it out as the appropriate field for the development of the young intellect. It suits well the restless disposition of childhood, when no one object pleases for a long time; and, unlike most other subjects, this retains its interest in after life: he who loves a flower in youth, will love it when he is old. The taste for nature must be planted early in life, to enable its possessor to enjoy a ripened harvest.

Every thing which the Deity has created is worthy of our attention.

“Nature has nothing made so base, but can
Read some instruction to the wisest man.”

The subject of Entomology, or the history of insects, is less understood in this country than that of any other department of natural science. This arises, perhaps, either from the circumstance that the knowledge of insects is obtained at a great expense of patient industry and acute discrimination, or from a want of taste, arising from a want of information in this most interesting department of animated nature. It is true, that few studies demand a more untiring devotion, than that of Entomology; and it is also true, that there is little in it which can be turned to a cash account; reasons sufficiently powerful to induce many individuals to keep at a respectful distance, and perhaps, as is usual in such cases, to put on their contempt to hide their ignorance.

The wonders of creative wisdom are no where more strikingly displayed than in the insect tribes. Every part of matter amidst which we live and move, swarms with myriads of beings, countless and various as the leaves of the forest, assuming every color that beauty could suggest, every form that the imagination can conceive, and, in perfection of powers and adaptation of parts to the circumstances of their existence, equalled by no other part of the animal kingdom. Numerous

and various as they are, minute as are their bodies, and transitory as is their existence, they are nevertheless bound by certain laws of their natures, which are readily perceived and explained. With no part of this living world are we more intimately connected than with the subjects of Entomology. Some, as the bee and silk worm, administer to our wants and enjoyments; others, whose design is less obvious to us, answer undoubtedly equally important purposes in the great economy of nature. The happy myriads that gambol in a summer's sun; the worm that gnaws at the root of our vegetable, that strips our fruit trees of their leafy glories, or that spins our costly garments; the blights of spring, and the locusts of autumn, spreading dismay and famine; and the coral insect, building its habitation mountain high from the fathomless depths of the ocean, to become the destruction of commerce, or the foundations of islands, rich in oriental productions, are all objects of interest to a contemplative mind.

Some of the general facts connected with this subject, and which will always be found useful and interesting, are such as relate to the origin and formation of insects; that most of them are oviparous, but some are both oviparous and viviparous—that they pass through several stages of being, assuming different forms and subsisting upon different kinds of food—that their structure and organization is peculiar to themselves—their mode of respiration differing from other creatures, the air being admitted to a complicated circulation through the system by means of spiracles and tubes on various parts of the body, but never on the head—no insect breathing through the mouth,—and consequently they produce all their various sounds by their wings, legs, and other parts of the body. The changes which most insects undergo in their transformation from the vile worm to the gay wanderer from flower to flower, are curious in the extreme. At first, we behold an atom, which on being exposed to the genial warmth, bursts its shell and exhibits the feeble insect, capable of procuring its own food,

amidst which, by the instinct of its mother, it has been placed. In its larva state, it repeatedly casts its skin, until, arrived at its full growth, it ceases to eat, selects some place secure from danger, spins itself a shroud, and, in a temporary death, a vivid emblem of mortality, awaits its final consummation of being, when it emerges from its tomb, and, changed in every organ, feature, and capacity, rises into a higher state of existence, to fulfil the important purposes of its creation.

No subject is more fruitful of moral instruction than this:—

“ Who can observe the bee and ant,
And not provide for future want?”

The admonitions to duty and perseverance, the example for self devotion to each other's welfare, rise at every stage of investigation into the habits of economy of these little creatures. Every department of creation is full of interest; in all we see enough to admire, but we do no injustice by the comparison, in saying, that no part of animated nature presents so much to feast our wonder and astonishment as this. The habits and labors of the bee have been admired in all ages; their industry and economy in the construction of their inimitable habitations—the mathematical exactness in which the cells are proportioned—the division of labour at home and abroad—the collecting of honey and poller—the care and attention to the young—the massacre of the drones, and the important functions of the queen, with the mysterious influence which her presence exerts over her loyal subjects, are among the displays of that faculty, which may be called animal reason, and which sometimes mocks at the boasted power of the human intellect, by a forecast and perception, unattainable by the wisdom and philosophy of man. A taste for the cultivation of the bee would add much to the numerous charms of our delightful country. Their history is a volume of useful instruction, and only needs to be known to be duly appreciated. The ant,

though a useless insect, compared with the bee, is in its history no less interesting and wonderful. The policy and labors of ants, their extensive habitations in the tropical regions, and the remarkable fact, that they keep vast numbers of aphides in a kind of domestic subjection, to furnish them with honey, guarded by them in summer, and protected in their cells during winter, give the air of romance to their history, and raise our admiration of that Power whose works are as perfect in an atom as in a globe. Design is no where more distinctly manifest than in the foot of a fly, which enables the insect by suction to walk in perpendicular and pendulous postures; or in the glow worm, whose shining light discovers her presence to her winged mate, herself being destitute of the means of flight. A limited knowledge of insects may often give pleasure to a summer ramble, and enliven many a lonely hour of pain and weariness. Although the objects of Entomology are insignificant when compared with the nobler races of animals, which more immediately affect our interest, yet of every one who delights to trace the designs of intelligence in creation, and understand and enjoy the world around him, this study will command the few moments in the intervals of life, necessary to obtain its leading features.

One of the most obvious beauties of Natural History is the great variety in form and features, every where presented to us,—an endless variety, arising from the combination of a few simple principles, readily perceived and comprehended. Take for example the oxygen of the atmosphere, as a supporter of life, without which, no plant or animal can exist. In its application, how various are the means employed by nature, over all whose works, from the least to the greatest, an equal care is extended. In all warm blooded animals, the air is received into the lungs, where it parts with its vital principle to renovate the blood and give health and vigor to the system. In reptiles, a different modification of the lungs and the circulating system, produces a corresponding difference in the temper-

ature of the body and the habits of the animal, enabling some of them to exist in a torpid state several months without eating or breathing. In fishes, we discover another arrangement, that of gills, so constructed as to absorb the oxygen from the water in its passage through them; and in many of the lower orders of aquatic animals, the surfaces of their bodies, like the leaves of plants, appear to perform this important function; while in insects, as has been observed, the air is circulated by means of numerous tubes, interlacing the whole system and communicating with openings in various parts of the body.

In the vegetable kingdom, how simple are the elements which compose the endless variety there displayed. Oxygen, carbon, and hydrogen, are the simple substances, which, modified by the law and directed by the influence of vegetable life, perform the ceaseless changes in form, color, and consistence, in the growth, decomposition, and renovation of this important part of creation. These elements accumulate and rise into magnificence and beauty, to fill nature's storehouse with riches and plenty; then again are scattered to recombine in different proportions in other substances, and thus preserve the harmony and order of nature. These general ideas are easily taught, and not soon forgotten.

What has been said of the advantage, derived from the study of the names, habits, and structures of the inferior objects of creation, will also be applicable to the higher races of animals, with the addition, that our feelings become enlivened as our interest is influenced. The great variety of animals inhabiting the water, will be found to possess a peculiar interest, arising from their adaptation to the element in which they reside. The ocean is the great abode of animal existence, and the provision made for the support of the various tribes, and the means employed to keep in check the more prolific species, are among the most obvious displays of Infinite Wisdom. For most of the animals, great and small, inhabiting the land, a common food is provided in the vegetable kingdom;

comparatively few species prey upon others. But in the ocean, it is different; from the small animalculæ, to which a drop of water is a sea, to the mighty whale,

“ Whom God of all his works
Created highest, that swim the ocean stream,”

the condition of the being seems to be, to feed upon and in turn become food to others. The monsters of the deep are interesting to us from many considerations; their gigantic forms, the enterprise and danger of their capture, and the various uses to which they are appropriated in the arts and domestic life, render their history pleasing. The same is true of the smaller inhabitants of that element. The herring visits us annually from its home within the arctic circle; the shad and salmon perform their yearly pilgrimage to the highlands of the country, in obedience to the dictates of their nature; and in every individual species something may be observed which will amuse and instruct.

Amid the profusion of living creatures that surround us, none bring to us livelier sensations than birds; their peculiar form, beautiful plumage, and graceful motion through the air, always delight us. They seem to be the ornamental part of animated nature, as flowers are in the vegetable kingdom. Winter spreads a gloom over the face of the landscape, which in summer was adorned in glittering splendor; and we feel the cold desolation as we survey the silent relics of the departed year; but when spring returns, our feelings are enlivened to hear the winged heralds of seed time and flowers, returned from the sunny vales of the south, bringing the same sweet notes that so often charmed our infancy, and, if the heart has kept its purity, still touches the sympathetic chord in the breast of manhood. In spring, they give an additional enchantment to the smiles of infant nature; throughout the summer, they delight and amuse us with sportive animation in their exuberance of joy and hilarity.

Ornithology has long been the favourite study of the naturalist, and perhaps no contemplation of nature is better calculated to impart kind and amiable qualities to the mind. From the golden dotted humming bird, smaller than many insects, to the rapacious condor of the Andes, whose wings extend through sixteen feet—from the humble denizen of the hedge row or the cottage roof, to the birds of paradise, beautiful,

As if dropped from some higher sphere,
To tell us of the gorgeous splendor there ;

and each intermediate grade in color, form, and modes of living, all open a storehouse of rational enjoyment, which we can obtain no where else. The names and characters of birds are easily learned, but these alone are not the most valuable part of this subject. The grand object of the study of Natural History is to *enjoy*, in elevated and refined feeling, the works of creation ; to look upon all things with that calm complacency, which arises from an habitual contemplation of rural objects.

In the structure of birds, differing from all other creatures—in the circulation of air, not only in the lungs, but through the bones and feathers, for the purpose of making them lighter—in their food and habits of living—in the architecture of their dwelling, their eggs, and the parental care and attention for the young, we find abundant matter to amuse a young, or instruct a ripper age.

As we ascend to the highest class of animals, the mammalia, we find new wonders open to us in their more complicated forms and diversity of powers. In this extensive class are included most of the large and small quadrupeds, inhabiting the land, together with the cetacæ of the ocean, comprising the various kinds of whales, walruses, seals, &c. Consequently, the field of observation is as extensive and broad as the earth ; but those varieties which immediately surround us, are comparatively few, and their history easily acquired.

Animal Physiology is a fruitful source of useful instruction, and should by no means escape the attention of the teacher or pupil. Digestion, the circulation of the blood, respiration, the wonderful mechanism of the eye and the ear, are among the most useful items of general information, and may always be brought with an enlivening interest into the monotonous routine of daily teaching.

Natural History would be entitled to our veneration, if it taught us only the general outlines of our own system. It is certainly to be lamented that ignorance and prejudice should have so long triumphed over reason, in forbidding that most useful of all information, the anatomy and physiology of our own system. How few there are, who understand their own organization, or know in what manner the human system is influenced by climate, food, and apparel, which would enable them to take the precautionary measures to guard against accident or disease. It can be easily and successfully taught in any school, even without drawings or preparations; and childhood might soon be divested of its timidity, if judicious teachers were permitted, by public opinion, to treat this subject in a manner worthy of human beings. Some attention to the leading features of anatomy and physiology, cannot be too urgently recommended to all who have assigned to them the important duty of directing the education of youth. Important are the advantages arising from even a limited knowledge of our bodies, so fearfully and wonderfully made. Time will not now permit me to enumerate these advantages, though the injudicious treatment of children, the intemperate habits in eating and drinking, and the injurious fashions of dress, which would be most signally benefited by this knowledge, call aloud on me to advocate the cause of philosophy, reason, and humanity.

In attempting to introduce the study of Natural History into schools, the first duty belongs to teachers themselves. To what extent teachers are generally qualified to instruct in the various branches of this science is unknown to me; but it would

not be surprising if it were found, that many had overlooked this, in qualifying themselves for the duties of their stations. Such owe it to themselves and their pupils, to combine industry with perseverance, until the desired object be obtained. One half a day in each week could not be better spent by a school, than in collecting and examining specimens of natural objects. This would tend very much to enliven the duties of teacher and pupil, and be productive of much good, besides the knowledge gained. The teacher should improve all occasions, when any rare and curious object is thrown in his way : the instruction of a few moments, spent in calling the attention of a school to such objects, at any time, will be remembered when hard studied lessons shall be forgotten. Natural History owes more to Linnæus than to any other individual ; and he attributed his early bias and love for the study of nature, to the remarks his father made upon a flower, in a ramble, when he was scarce four years old. This botanical lecture, he observed, formed an epoch in his scientific life.

We would not exalt the study of Natural History at the expense of any other ; we only wish it to occupy its appropriate place in education. What is life, but a school, where men and animals and things are the subjects of daily study ! *

* "Natural History is very little estimated, as it ought to be. Three considerations recommend it as a most important branch of study for boys and youths, in the school and academy.

1. I regard Natural History, when judiciously and faithfully taught, as one of the best preservatives against irreligion. Young people enter into life, in ninety-nine cases out of one hundred, as ignorant of Natural History as a boy of his father's library, which he has only seen through the glass doors of the bookcase. The natural world, instead of a *living*, is actually a *dead* world to the mass of educated persons. They know little or nothing of its facts, and absolutely nothing of its science. It is not surprising, therefore, that most educated persons look upon the works of God, in the visible world, with as little emotion or thought, as upon the works of man. They have no settled opinion, no habitual feeling, that a tree is a piece of more admirable

In our country, where freedom of speech is uncontrolled, there is a want of something to engage the attention, and draw it off from those subjects of feverish excitement, which spread with such scorching influence in these days of modern reform. The mind will be active, and if it have not some useful subject upon which to spend its energies, it will feed on trifles. To remedy this, in part, we know of no better method than to interest the mind in observation of nature, which is always around us, to win our attention and call forth our imagination. Natural History is not the amusement of a day, but it opens

mechanism and workmanship, than the group of Laocoon, the Parthenon, the transfiguration of Raphael, or the church of St. Peters. But, if young people were thoroughly acquainted with the important and interesting facts of Natural History, and faithfully instructed in its curiosities and wonders, with an express view to illustrate the power, wisdom, and benevolence of God, can we doubt that they would grow up, with such deep and fixed opinions on those important points, as to have no avenue for doubts, either in early manhood, or in later years? Is it possible that youth can appreciate rightly these attributes of their Maker, Ruler, and Judge, when they are so lamentably ignorant of his works?

2. The second advantage to which I refer, is, that this knowledge, more than any other, except Religion, (and what is Natural History but the handmaid of Religion?) becomes a perpetual companion, by land or by sea, in the town or in the country.

3. A third consideration is, that the curious and interesting facts of Natural History are an inexhaustible and varied fund, for social intercourse; so that many an hour now passed in frivolous or useless, if not pernicious, conversation, would be both agreeably and instructively spent.

It appears to me, that an acquaintance with the Natural History of man, is more important to educated persons, and more worthy of high rank in the scheme of liberal education, than all the mathematics that are taught in colleges. I conceive Anatomy to be a far more valuable, instructive, and noble study for a young man, than spherics, conics, &c., and if the choice lay between mathematics, and the Natural History of the human species, I should prefer the latter, as a branch of College education."—GRIMKÉ.

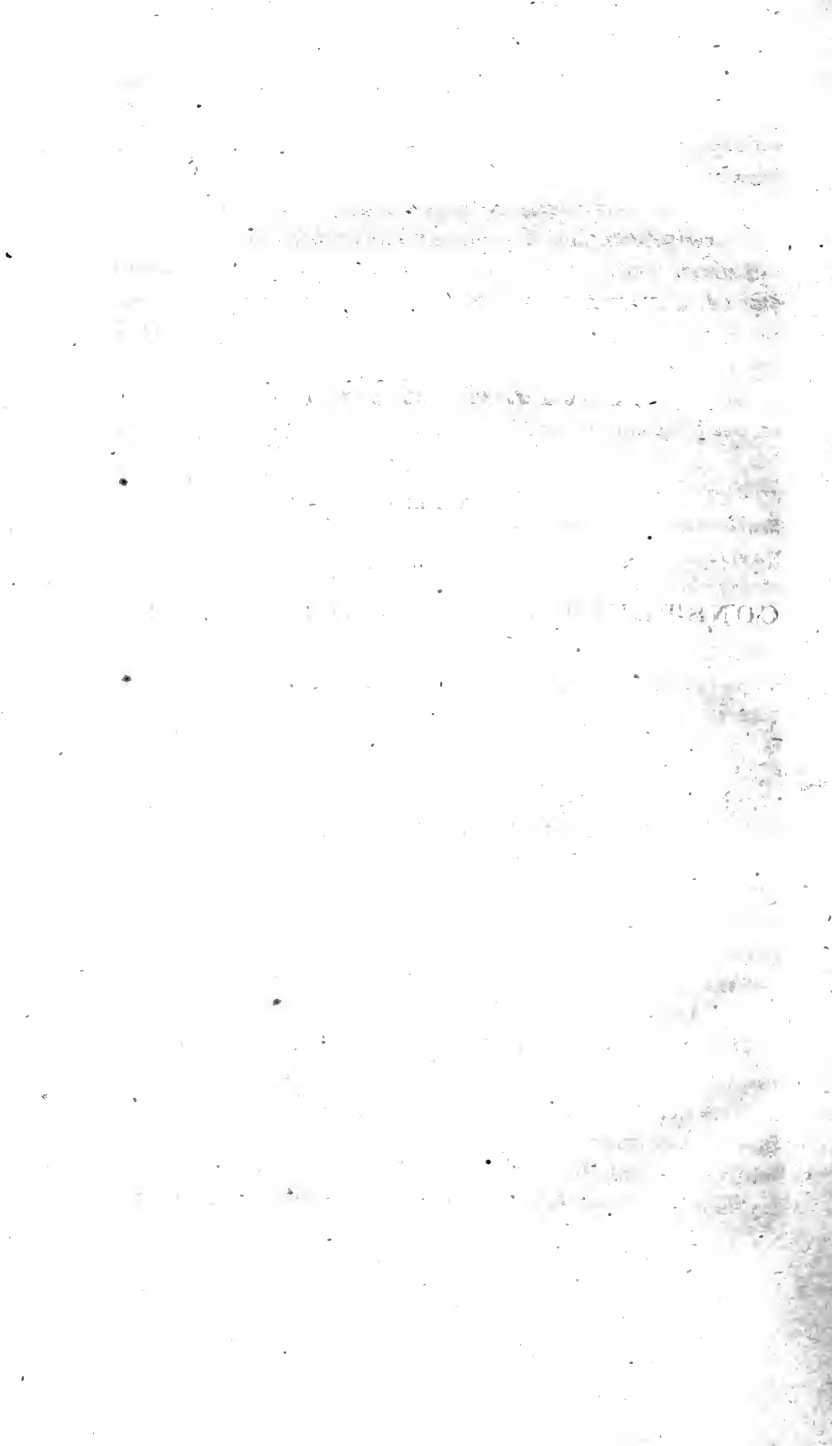
an inexhaustible fund of enjoyment, by enabling us to perceive the beauties of nature. It unseals that book, in which are written the wonders of creation ; it raises the thoughts and feelings, refines the taste, corrects and improves the judgment, gives mildness to temper and amiableness to disposition, which soothe the frequent pangs along the rugged paths of life, and strew the vale of declining years with many a thornless flower, in the recollection of innocent enjoyments. It is the fountain of inspiration to the poet and orator, being the great source of metaphorical language, which gives a brilliancy to the imagination and force to eloquence. It inspires genius by giving it the elements of its action. It is the origin of painting, sculpture, and engraving ; and to every art that dignifies or adorns, it furnishes the material, and suggests the model. In teaching Natural History to children, then, we do but obey the dictates of nature, in introducing them to her countless wonders and varying scenes, where, if they wander, it is in innocence and light : we do but follow the footsteps of philosophy to her refreshing fountains, on whose flowery banks, manhood may pause to contemplate and admire, and age at the harvest become renovated by a remembrance of the past, and be blest in the anticipations of a spring, when itself and all things shall be clothed in loveliness and beauty.

PRIZE ESSAY

ON THE

CONSTRUCTION OF SCHOOL-HOUSES.

BY WILLIAM A. ALCOTT.



R E P O R T ,

THE Committee, appointed by the Directors of the American Institute of Instruction, to examine the several Essays which have been offered "*On the Construction of School-Houses,*" and to award the Society's premium to the author of the best one, respectfully ask leave to

R E P O R T :

That they have given the subject committed to them, that deliberate consideration which its practical importance to the great cause of common education seemed to them to require. They have carefully examined five Essays, with their accompanying plans; some of them being of considerable length, and all of them containing valuable suggestions upon the several topics discussed in them. And while the Committee would not be understood to predicate absolute perfection of any of them, they have unanimously agreed that the one offered by WILLIAM A. ALCOTT, of *Hartford, Ct.*, is decidedly the best. And they do hereby award to him the premium of TWENTY DOLLARS, appropriated by the proper authorities of the Institute for that purpose.

The Committee ask leave further to report, that pending their deliberations, they received a scientific and valuable communication from Mr. WOODBRIDGE, of *Hartford, Ct.*, upon the "*Size of School-Rooms ;*"—a topic intimately connected

with, or rather forming a part of, the more general subject discussed in the Prize Essay. In view of its merit, both as a distinct performance, and as an amplification of one topic of the subject proposed for the prize, the Committee herewith submit the document; and recommend that it be appended to the Prize Essay, and published with that, agreeably to the Resolve with which this Report concludes.

All which is respectfully submitted by your Committee.

JAMES G. CARTER.

E. BAILEY.

J. KINGSBURY.

1. *Resolved*, That the thanks of the Institute be presented to Mr. Woodbridge for his timely and valuable communication upon the "Size of School-Rooms."

2. *Resolved*, That the Prize Essay "On the best Construction of School Houses" be read before the Institute, at such time during its present session as convenience may suggest; and that, together with the document appended, it be printed under the direction of the Censors; and that each member of the Institute receive, on application, one copy gratis.

CONSTRUCTION

OF

SCHOOL-HOUSES.

THAT the general arrangement and appearance of even inanimate things around us, have an extensive influence in forming our character, will hardly be questioned. Every object, and every individual we see, either renders us more cheerful and happy, or the contrary. The condition of those objects, therefore, which surround a collection of children, whether the number of those children be five, fifty, or one hundred, must of necessity have a very considerable influence in forming their dispositions, and giving a determination to their future character.

Nor is their present comfort a matter of indifference, any more than that of the same number of adults. Where is the parent to be found, who would select as a location for his dwelling, the junction of four roads, or a portion of the highway, or a sand-bank, marsh, or swamp? Or, who would choose, for this purpose, a bleak hill, a wilderness, or some lonely and secluded spot, rarely visited by man or beast? With a few misanthropic exceptions, mankind love to dwell in airy places, affording a pleasant prospect. They are fond of having shade and fruit trees, shrubs, flowers, fountains, and greensward around their dwellings. The number of those who prefer the disagreeable sight of barren hills, and fields, and sand-banks, or the nauseous and unwholesome exhalations of stagnant

water, the barn yard and the sty, to the fragrance and rich scenery alluded to, must certainly be small: yet what is more common than to find school-houses exposed to many of these evils, and sometimes to all of them combined? The strongest evidence is every where afforded, that in constructing and furnishing them, we too often consult our own convenience, rather than the comfort, welfare, or accommodation of our children. Location, size, structure, internal arrangement and furniture—all combine to force upon our minds the same conclusion. The many dark, crowded, ill-looking, and *sometimes* disorderly and filthy huts, to be found in the country, called, or rather *mis-called* school-houses, seem to have been provided as a kind of necessary evil, rather than as places of voluntary and cheerful resort for the offspring of the proprietors. In conformity with these views, we are told by a recent writer on this subject, that of forty school-houses with which he is acquainted in a single county, "*three fourths*," as he judges, are "located without regard to the comfort, health, and happiness of the children. They stand in gloomy, unhealthy places, without a feature of beauty in the scenery around them."

Few, indeed, of the numerous school-houses in this country are well lighted. Fewer still are painted, even on the outside. Play-grounds, for common schools, are scarcely known. Hence the pupils are obliged to play in the road, exposed to every attendant danger, both physical and moral.

Nor are the internal arrangements more favorable. There is much suffering from the alternation of heat and cold, and from smoke. The feet of children have even sometimes been frozen. Too many pupils are confined to a single desk or bench, where they are constantly jostling or otherwise disturbing each other. The construction of the desks and benches is often bad. Little or no provision is made for free ventilation. Hundreds of rooms are so small that the pupils have not, upon the average, more than five or six square feet of surface each; and here they are obliged to sit, breathing impure

air, on benches often not more than six or eight inches wide, and without backs. Many of these benches are so high that the children's feet cannot reach within several inches of the floor. Thus suspended, between the heavens and the earth, they are compelled to remain motionless for an hour or an hour and a half together. These things ought not so to be. Their health and comfort are believed to be far more important than their progress in science; and in providing for their accommodation during the hours of study, these are the first points to be secured. *Health*, as well as *time*, is *money*; and it is a most mistaken economy which confines a child to those arrangements, and to that atmospheric impurity, which render him unfit for vigorous effort, and thus slowly, though surely, impair his constitution: for we impose by these means a far greater tax on the parent, than would be necessary in erecting the most spacious buildings, and furnishing ample and liberal accommodations.

Some of the above-mentioned evils arise from the fact that the centre of population of the district has usually determined the location of school-houses. But a central situation should be regarded as a matter of only secondary importance. The house should stand on an elevated spot of firm soil, at a moderate distance from any other buildings, or any public road. A few shade trees should be near, and if convenient, fruit trees. A piece of ground, consisting of from a quarter to half an acre, should be devoted to the purposes of the school, and enclosed by a fence or wall in such a manner as to prevent, at the pleasure of the instructor, any communication from without. The main building should be near the side of the enclosure adjoining the usual point of entrance. The wood should be kept in a separate building, as the danger from fire is thereby diminished, and the house can be kept more cleanly and airy. In the rear of these should be a spacious play-ground, part of which should be paved, and covered with a kind of roof, or awning, where recreations may be conducted in unfavorable

weather. Nearly of equal importance are a flower garden, a well or spring of good water, and facilities for washing. The rest of the enclosure may be devoted to the purposes of agriculture and horticulture, whenever these exercises shall come to be regarded as indispensable to every district school.

When the soil is not naturally firm, an artificial soil should be substituted; and the main building should always be elevated, at least two or three feet above the surface immediately around it.

The height of the house, if thus elevated, need not exceed a story and a half. This will give room for placing the windows higher than usual in the wall, a point which will be insisted on hereafter. The ceiling should be arched, the walls plastered, and whitewashed, or perhaps painted.

A building intended for about sixty pupils, should be 40 feet in length, by 30 in breadth. This is probably a greater than a medium number of pupils, but for a larger or smaller number, the same plan may be observed, increasing or diminishing the size of the building accordingly, though not in exact proportion to the increase or diminution of numbers, because the doors, entries, stove, &c., will occupy nearly as much space in a small house, as in a large one. For one hundred pupils, 48 by 40 feet is a convenient size; for fifty, 36 by 30; for thirty-six, 34 by 24. But a considerable number of the schools in the northern and middle States, contain fifty to sixty scholars, at least in the winter; and consequently require a building as large as is here contemplated. (*See the drawing, No. 1.*)

In the plan here proposed, separate entries (*a a*) for the sexes occupy the south end of the building, each of which is 15 feet in length, by 5 in breadth. Within these entries, a suitable number of wooden pegs are placed, at a proper height, and suitable distance from each other, for hats, coats, and cloaks; and a few benches or stools for the use of the smaller pupils, while adjusting their shoes, clothes, &c. The dimensions of the school-room itself are 35 by 30 feet, including

the instructor's platform. This platform (*b*) consists merely of an elevation of the floor across the north end of the room, to the height of 18 inches, and 4 feet in width; on which are a moveable desk and seat (*c*) for the instructor.

The seats and desks for the pupils, (*d*.) occupy the central part of the room, and are arranged in rows from north to south, in such a manner that the pupils face the instructor. There are eight rows, having seven desks in each row, with corresponding spaces or aisles, (*e*) $1\frac{1}{2}$ feet wide, between the rows. The desks are 2 feet long, $1\frac{3}{4}$ feet wide, and the seats about a foot square. The latter, except those at the southern end of each row, are attached to the desks immediately behind them, in such a manner, that the front of each desk forms a back to the seat of the pupil who occupies the next.

The desks and seats are so constructed as to leave no shelves or cavities under them. Each seat is, in effect, a square box closed on all sides. It is well known to instructors that when the hollow under the seat is left open as a place of deposit for a hat, &c., or shelves furnished for locks *under the desk*, playthings of various kinds, together with the shells of nuts, and the cores and stones of fruits, are accumulated here by indolent or vicious pupils, to such an extent as often to occasion much trouble. It is to prevent the possibility of evils of this kind, in part at least, that a different construction is recommended. With the same view, as well as to favor clearness, and purity of the air, all hats, spare clothes, provisions, fruits, &c., should be left in the entries. *Flowers* may, however, be permitted to remain in the room during the day time, as they purify, rather than injure the air.

The proper and most convenient place for the pupils' books and other apparatus, is a box or case in the front part of each desk. The relative position of this box will be illustrated by *drawing, No. 2*. Its width is 8 inches, and its depth about a foot, so as to receive the largest slates, atlases, and writing-books, when placed edgewise; for which purpose there

is a narrow division of the box, formed by a thin partition. The largest division is for books only. The lid, (e) when closed, forms a part of the upper surface of the desk. That part of the desk which forms the back to the next pupil's seat, is elevated about 3 inches above the level of the desk, both for his accommodation, and to prevent the lid of the book-case from falling over too far in that direction.

The height of the desks and seats is proportioned to the height of the pupils who occupy them. They also bear a certain proportion to each other. Those which are nearest to the instructor's platform are the lowest, and those which are most remote, the highest; both because the pupils who most need the instructor's aid will be nearest to him, and removed farthest from the noise which is sometimes unavoidable about the stove and entries; and because the view of the school from the platform will be more complete.

The particular arrangement of each seat and desk, is such as almost to compel the person occupying it to sit in an erect position. The edge of the desk will be directly over the edge of the seat. In writing, the arms will hang naturally by the side, while the flexure at the elbow will be such, that the lower portion of the arm, with the hand, will form a right angle with the upper portion, and rest lightly upon the desk. The desks will thus be much lower than is usual, but all parts of the body, as well as every limb, will be at the same time free and unconstrained. This is a point of vast importance. The most common position at the school desk is extremely unfavorable to the healthful action of the lungs, stomach, liver, &c., as well as liable to produce distortion of the spine, and consequent disease. Some have recommended desks gently sloping. My chief objection to this, is, that it is not common to meet with them in this form in the daily business of life. Not one in six of the pupils will write on a sloping desk after leaving school. Besides, the view of the instructor from his platform will be slightly obstructed, the general arrangement

le's simple, and rather more expensive. On the proposed plan, the construction of the whole is simple, and by no means expensive. The boards forming the desk and book case, are supported by two broad pieces of plank placed upright at the ends, and by the seat attached to it in front.

Although the present plan admits of but fifty six desks, yet there is a seat (*n*) attached to the fore part of each of the eight desks which are nearest the instructor's platform, which, instead of being, like the rest, about a foot square, are two feet in length. On these, eight small pupils, and in an urgent case sixteen, may be seated *without desks*. The whole number of pupils thus furnished with *seats* in the main room, would be seventy-two. These front seats will also answer another important purpose. Classes may sit here to recite to the instructor, or to witness experiments; and if smaller pupils happen to be occupying the seats, they can be transferred, for the time, to the stair (*m*) of the platform.

Thus the whole school will generally face the instructor, who can oversee them from his platform, and pass, with the utmost ease and facility, from one to another, to direct or aid them, inspect their books, book-cases, slates, writings, &c. If lessons are given, or exercises performed on the black boards, either over the instructor's platform or on the wall, they will be in full view of all the scholars, without moving from their seats. When a pupil wishes to leave his seat, it can be done without disturbing half a dozen others, or compelling them to rise every time he wishes to pass, as is often the case when the desks are connected. There will be more difficulty, it is true, in crossing from one space or aisle to another; but this will rarely be necessary. It will be better to pass around the north or south ends of the rows. When it is necessary, however, to cross from east to west, only *one* pupil is compelled to rise at a time.

The spaces between the outside rows of desks and the walls are 2 feet in width. If black boards or lessons are placed up-

on the walls, it is desirable that these outer spaces should be 4 feet wide, instead of two. It is not, however, indispensable; and my present purpose is to give the smallest space which will answer for the proposed number of scholars.

The instructor's platform may be occupied for various purposes. On it, the pupils may take their station to declaim, classes or individuals recite, and visitors be seated. Here, too, is an extensive black board, over which are *cases* for depositing apparatus, and for the school library. If the school has a museum, or collection of natural and artificial curiosities, it is convenient to have this also near the instructor; and if experiments are made in chemistry, or any of the other sciences, the platform will be very convenient for that purpose. The instructor will also have the means of keeping his eye, through the medium of the two windows at this end of the room, on the play-ground; and through the most northern windows on the west side, on the garden, and adjacent portion of the enclosure.

The stove stands near the entrances. Between the nearest row of desks and seats, and these entrances, there is a space (*oo*) unoccupied, except by the stove, (*k*) and other furniture about to be described. This space, 8 feet wide, extends across the whole width of the house. Between it and the first row of desks, are two movable black boards, or semi-partitions, (*ff*) each 12 feet in length, and 5 feet in height, consisting simply of boards painted black on both sides, and nailed to upright posts, supported in an erect position by being framed to cross pieces, or sills, three feet in length. Their uses will be mentioned presently.

This vacant space is naturally divided into two portions by the stove. Seats (*g*) are furnished to both; taking care, however, to leave sufficient room to pass the semi-partitions to the principal school-room. If the monitorial system is adopted in any of its various modifications, this will be a proper place for recitation. Indeed, let the system of instruction be what it may,

these spaces will furnish every advantage of separate recitation rooms, with but half the expense. The south side of the semi-partitions will furnish them with a black board. At other times, the instructor might use these places as an appropriate retirement for reproof or discipline. But I have principally in view another object still. The time, it is hoped, is not far distant when every school of any considerable size will be divided into two departments. When this period shall arrive, the female assistant teacher may occupy these apartments, with ten, twenty, or even thirty pupils, until the public mind shall be so thoroughly awakened to the importance of such an arrangement, as to erect, for the purpose, still more ample and commodious buildings.

The movable black boards also answer several other important purposes. The side towards the instructor will often be convenient as a black board for the main school. Being five feet high, they may also be placed in such a manner as to screen the pupils near it from that intense heat, which occasionally emanates from a stove, as well as from currents of air from the doors, when the pupils are coming and retiring.

The majority of existing school-houses are very imperfectly lighted, as has already been observed. But on the present plan, the windows (*w*) are so arranged as always to afford sufficient light; and if in excess, curtains should be interposed.

It is believed that the windows of a school-house ought to be elevated about 5 feet above the floor. The following are some of the reasons. 1st. It will in this way be more difficult to look out at them, and much trouble will thus be saved to the instructor. It will also preclude the necessity of nailing boards across the lower part of windows to prevent the pupils from looking abroad, as is sometimes done. 2. They are less liable to injury. 3. There will be less exposure of the pupils to currents of air. 4. This structure is favorable to ventila-

tion, especially if the upper part of the windows be made (as they ought to be) to be *lowered* at pleasure. 5. The light will not strike so directly upon the eyes of the pupils, as when the windows are lower in the wall. 6. Another reason of still greater importance is, that by having a broad space left below the windows, room is afforded for prints, paintings, engravings, maps, and charts; or for any other similar means of instruction.

The windows ought by all means to be furnished with curtains and blinds; and if the former are judiciously selected, they may be made to afford the material, or furnish suggestions, for many important and interesting lessons. It is desirable that paper curtains should be prepared expressly for school-rooms, under the direction of some individual who understands the wants and capacities of children.

Holes or windows should be made in the roof of every school-house, that the impure air may sometimes be suffered to escape in that direction. The proper place for these windows is in the roof, about two-thirds of the way from the south to the north end of the building. One method of raising the shutters and opening these windows is, by means of ropes fastened to their tops, and then carried over pulleys and suspended in the room. The windows may fall by their own weight; or if not, by means like those devised for raising them. There must, of course, be holes or spaces in the arched ceiling of the room, to correspond with these windows.

The floors of school-houses should be made of oak, or some very hard wood; not only because it resounds less, but because it is more durable. If the desks and seats were made of the same material, they would probably be less exposed to injury, especially from vicious pupils. For black boards a softer kind of wood is preferable. Linden, or bass wood, has been recommended.

The doors (*h*) at the north end of the room communicate with the garden and play-ground, and also serve for the ad-

mission of fresh air, either to cool the room, when necessary, or to aid in ventilating it.

Notwithstanding every arrangement hitherto proposed, it is obvious that the subject of *ventilation* may not receive that attention which its importance demands. Spacious apartments, like that which I have proposed, are indispensable, as well as a due regard to the number and position of the doors and windows. Still, if the latter are kept constantly closed, and the pupils are not permitted to stir from their seats oftener than once in an hour, or an hour and a half, their health may be seriously impaired. Respiration alone contaminates the air at a rate which is truly surprising to those who have not been accustomed to examine the subject. When to this source of impurity we add the effluvia which are constantly escaping from the surface of all living bodies, together with other causes which are at the same time operating, we can scarcely avoid wondering why the *immediate* injury sustained by the human constitution in confined rooms is not greater than we find it. Nothing but the fear of extending my remarks to an improper length prevents me from devoting several pages to this important subject. I cannot but indulge the hope, however, that it will soon be investigated, and the results presented to the public. At present I will only add, that after every precaution in regard to ventilation, which human wisdom can devise, every pupil should be required, and, if necessary, *compelled* to go out into the open air, at least once in an hour. Probably once in half an hour is not too often.

The best method of warming school-rooms is by means of air heated in some adjacent apartment, and conveyed into the room by pipes or funnels. When this course is not adopted, I prefer for the purpose an open stove, with either dry wood or charcoal. Much loss is sustained by burning *green* wood. The fore part of the stove should be towards the entrances, and pipe enough should be used to keep up as equable a temperature in the room as possible. During the cold season, fires

should be prepared about two hours before the time of opening school in the morning. The room may then be ventilated often, as the heated walls, floors, and furniture will quickly restore the temperature of the air. A thermometer is useful, and the heat may be graduated by it. The pupils should not be suffered to leave the school at evening in a profuse perspiration, as sometimes happens, but the temperature should be reduced gradually during the last hour of the afternoon, until they can go out with safety.

Without adverting to the subject of *personal* cleanliness, which indeed does not come within the scope of the present essay, I cannot refrain from urging the importance of paying the strictest regard to the purity of the walls, ceiling, floors, and furniture, by frequent washing, scouring, brushing, &c. Mats and shoe-scrapers at every door are indispensable; yet nothing is more generally neglected.

It is surprising, that while a large proportion of the dwelling houses in this country are painted, and the expense is deemed necessary in point of economy, we scarcely ever see a painted school-house. Would it not render the covering of these, as well as that of other buildings, more durable? But placing economy out of the question, what adult person is so destitute of taste, as not to prefer painted buildings even on account of the appearance? And are not children better pleased with handsome houses, fences, walls, &c., than with those of a contrary description?

If the walls in the interior of the school-room are painted, it is desirable to have it done with a reference to the improvement of the pupils. Numerous interesting and instructive scenes might thus be presented, both historical and descriptive. The floor should be level, rather than *sloping* (as some have recommended) towards the instructor. Every school will need some kind of time-piece, which should be placed over the instructor's platform, in full view of the pupils.

I have already said that every school ought to have a spacious play-ground. The means of performing gymnastic exercises should be afforded, but to what extent I am uncertain. But I cannot help anticipating a period when every common school will have the means of attending to agricultural and mechanical pursuits more or less every day, and be furnished with all the necessary *implements*, made of a proper size for the smaller, as well as the larger pupils. It is to be feared, however, that though strict economy, no less than the health of the pupils, is believed to require it, the day when they will come into general use, is still distant.

It may be objected, that the school-room here proposed, is *larger*, and consequently *more expensive than is necessary for common schools in country towns*. But it affords scarcely *nineteen square feet of surface*, that is, a space about *four feet square* to an individual: while it has been estimated that a space *four feet square*, and of the usual height of rooms, is the least which can be occupied for one hour by a pupil with safety. The air is supposed to be rendered entirely unfit for healthy respiration at the rate of a *gallon a minute*, or about a hogshead an hour. But as the *carbonic acid*, from its greater gravity, settles towards the *floor*, a hogshead of this air will reach about to the height of a child's head, who is sitting confined to the space above mentioned, or so nearly that he cannot avoid inhaling it.

Were not the detail too horrible, I might relate the dreadful story of destruction at Calcutta. At present I will only say, that one hundred and forty-six persons were confined to a room 18 feet square, for ten hours; and though there was one opening for the admission of air and light, only twenty-three persons were living at the end of that time. They were destroyed by the impure and poisonous air. Can children, in groups of fifty or one hundred, spend even *one hour* in rooms of similar dimensions, and escape wholly uninjured?

I visited a school not long since where there was about 30 feet of space, that is, an average of much *more* than 4 feet square, to an individual. I inquired if the room was not unnecessarily large. "By no means," said the teacher. "I should be unable to spare a foot of it." An able instructor once informed me that he visited a school-room in the city of New York, where more than twice even the last mentioned space was afforded to each pupil. Yet he voluntarily remarked that there was no loss, but great gain, from having so much room. The ease and freedom with which the varied duties of the school can be performed where ample space is allowed, and the consequent increase of progress in science, will more than compensate for the additional expense, were health out of the question.*

In regard to the *expense* of erecting separate desks, I am most decidedly of opinion that the amount of time saved by it, will be more than a sufficient compensation. Any thing which saves *time*, saves *money*; and I think *time* enough would be saved in three years by single desks, to amount, at the lowest possible estimate, to \$100, including food, clothing, and tuition—for these are properly included in the estimate.

* From a statement of Dr. Bache, quoted by the Journal of Health, Vol. II. No. 6, it appears that each of the cells for solitary confinement, in the new Penitentiary at Philadelphia, contains more than 1300 cubic feet of space; which is equal to a room 14 feet long, by 12 wide, and nearly 8 high. I am acquainted with several school-rooms smaller than this, and without ventilation; while in the *cells* alluded to, the most thorough attention is paid to ventilation, cleanliness, and temperature. The prisoner is also allowed an amount of exercise in the open air, when the weather is favorable, almost equal to that which is allowed to the pupils in many of our schools. In one instance, the amount of space to each *school-room* prisoner, is less than 36 cubic feet, while the adult convict in the penitentiary is allowed more than 1300! Much complaint has been made of the danger of life and health from confinement in these cells; but how seldom do we hear the voice of remonstrance against contracted school-rooms!

The saving need be but fifteen minutes a day to each of fifty pupils. Let him who has had experience in the business of instruction say whether more than even this amount of time is not lost, by the present arrangement of a majority of existing school-rooms. My purpose has been to keep economy in view, in every suggestion. Separate desks for each pupil I regard as absolutely indispensable. As to the increase of size which they give to the school-room, it should be remarked that the purposes of health cannot possibly be answered without an amount of space at least *as great* as I have proposed, whether we use single desks or not.

The *height of the windows* may be objected to by some. But the reasons for this innovation upon the prevailing custom have been fully given; and though it may be regarded as a violation of good taste, the numerous advantages which this arrangement will secure, vastly outweigh every other consideration.

Should it be said, that *the room thus constructed, cannot be used with so much convenience for meetings or for other purposes*,—my reply is, that it was not *designed* for other purposes, but for a *school-room*. If it can be used for meetings and other purposes without injury, so much the better; but nothing should be permitted to interfere with its primary object. Even recreations should not be permitted here. If storms or inclement weather absolutely forbid going into the playground, or if there be no roof thrown over any part of it, the division intended primarily for recitation, near the stove and entries, may be occupied for this purpose, but not the main room.

Finally, it may be said that *classes cannot be formed with so much ease and despatch, on the present, as on the old plan*. Did my limits permit, I think I could easily show that this objection is entirely without weight. Not only can classes be formed in their seats, almost instantly, but by moving only a single step, they find themselves in the spaces or aisles, ready

to march in a row to any place designated,—to the instructor's platform, the black boards, or the play-ground. In fact, the very construction of the desks, places the pupils in right lines, and almost compels them to maintain that position. Each pupil is situated about three feet from his neighbors, at the right and left, and separated by the whole width of a desk from those who sit next to him in the other direction. Of course, it will be rather difficult for one to communicate freely with another; at least without the knowledge of the instructor. At present, it is not uncommon to see half a dozen heads huddled together. They *may* be engaged in study; but they may, too, be doing mischief. How much better is it to prevent evil, by such an arrangement that a vigilant instructor can see the whole school at a single view, and, with a proper degree of care, keep the pupils in the way of duty, than to expose them to unnecessary temptation, and then punish them for offending.

If a room for the special purposes of a museum, and as a place of deposit for apparatus, should be desired, (and it is hoped it may be) the house must be somewhat larger; and this room should be in the rear of the teacher's platform, on the same elevation. For the present, I have supposed shelves, cases, &c., might answer the purpose.

Again—no provision has been made for the pupils standing at higher desks a part of the time, because it is believed they may *sit* without injury for about *half an hour at a time*, and then, instead of standing, they ought to walk into the garden, or exercise in the play-ground a few moments, either with or without attendants or monitors. Sitting too long, at all events, is extremely pernicious; particularly where the desks are too high. This is one principal reason why a large part of our youth have their spine distorted, and the right shoulder higher than the other. For the same reason, and for want of exercise, the muscles which are connected with the spinal column,

are but partially developed, and the whole body, especially the nervous system, is enfeebled.

The relative position of each pupil should occasionally be changed from right to left, otherwise the body may acquire a change of shape by constantly turning or twisting so as to accommodate itself to the light, always coming from a particular window, or in the same general direction.

If a portion of the play-ground is furnished with a roof, the pupils may sometimes be detached by classes, or otherwise, either with or without monitors, to study a short time in the open air, especially in the pleasant season. This is usually as agreeable to them, as it is favorable to health. A few plain seats should be placed there. A flower garden, trees, and shrubs, would furnish many important lessons of instruction. Indeed, I cannot help regarding all these things as *indispensable*, and as consistent with the strictest economy of space, material, and furniture, as a judicious arrangement of the school-room itself.

Sensible objects, and every species of visible apparatus, including, of course, maps, charts, and a globe, are also regarded as indispensably necessary in illustrating the sciences. They not only save books, time, and money, as has been abundantly proved by infant schools, but ideas are in this way more firmly fixed, and longer retained. In the use of books, each child must have his own; but in the use of sensible objects and apparatus, one thing, in the hands of the instructor, will answer the purposes of a large school, and frequently outlast half a dozen books.

Such are the views which my own personal experience and observation have led me to adopt in regard to this important subject. I am aware that on some points they are opposed to prevailing opinions, but while I cannot suppose that they are entirely free from error, I cannot but hope that these and other means proposed for the improvement of our schools will not be rejected without bringing them to the test of a fair experiment.

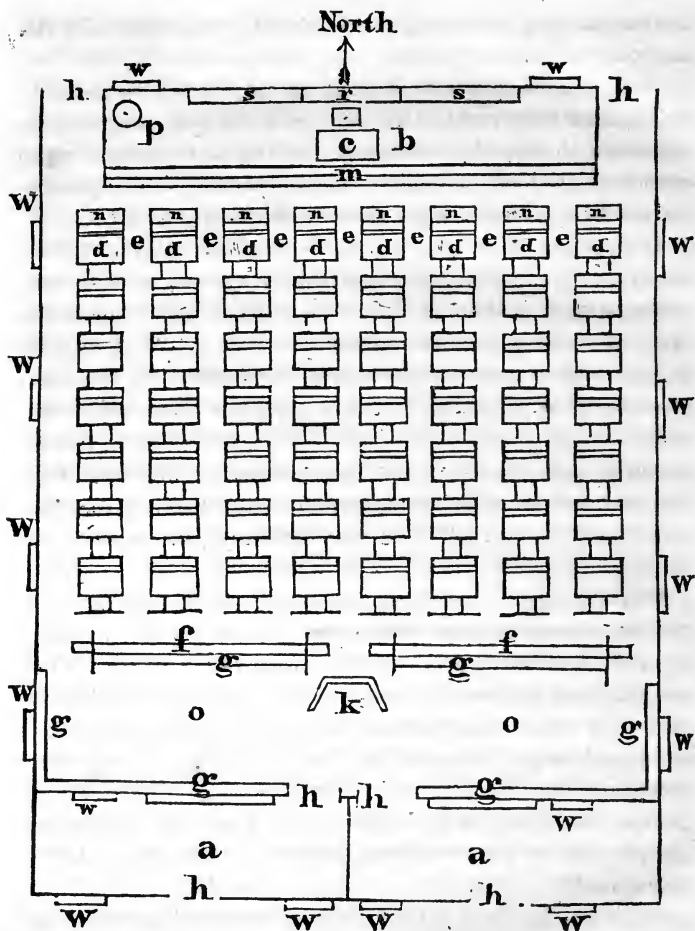
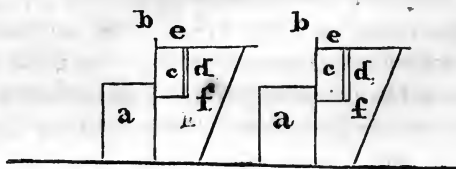


FIGURE 2.



EXPLANATION OF PLATE I.

FIG. 1. THE PLAN OF THE SCHOOL-HOUSE.

- aa* The two entries.
- b* The Instructor's platform.
- c* Instructor's desk and seat.
- d* Desks, 2 feet by 14 inches.
- e* Spaces between the rows of desks, $1\frac{1}{2}$ feet wide.
- ff* Movable black boards.
- g* Seats, for those who are reciting, &c.
- h* Doors.
- k* Stove.
- m* Step for ascending the platform.
- n* Seats for small pupils, and for recitation.
- o* Space 30 feet by 8, for recitation, &c.
- p* Globe.
- r* Library.
- s* Place of deposit for Museum, &c.
- w* Windows.

FIG. 2. SIDE VIEW OF THE DESKS AND SEATS.

- a* Seat.
- b* Back of the seat, or front of the desk.
- c* Case for books, &c.
- d* Narrow division for slates, &c.
- e* Lid to the book case.
- f* Form of the plank which is the principal support of each end of the desk.

A P P E N D I X.

COMMUNICATION

ON THE

SIZE AND VENTILATION OF SCHOOL-ROOMS.

*To the Committee of the American Institute, on the Subject of
School-Houses.*

GENTLEMEN,

THE *air* we breathe is so common a blessing, that its value is not estimated ; and the importance of preserving its purity in schools, by constructing rooms of sufficient size, and providing ample means of ventilation, cannot be appreciated, without considering the influence which it has upon life, health, and mental vigor. While I shall not attempt to offer an entire plan for a school-room, I have hoped to promote the general object you have in view, by collecting the principal facts in relation to the subject of *air*, which ought to be considered in its construction and arrangements.

The heart of a healthy individual, of mature age, beats about sixty-six times a minute, or four thousand times an hour ; that of a child, much faster. The whole mass of the blood is supposed to pass through it, fourteen times an hour, or once in four minutes. After it returns through the veins to the *heart*, and before it is again sent out into the body, it is made to pass through the *lungs*, where it comes in con-

•

tact with the air we breathe, and undergoes several important changes.

1. Its *temperature* is raised several degrees. 2. Its *color* is changed, from a dark red to a light crimson—a change which the venous blood will undergo when drawn from the body and placed in the air; and it is found to contain an increased proportion of oxygen, or vital air. The whole mass of blood, thus altered every four minutes, conveys heat and nourishment and life to the extremities of the body; and if the process be interrupted, or imperfectly performed, for four minutes only, every organ and member of the body is of course more or less affected.

These changes *cannot be produced* without the presence of oxygen, or vital air; and they are produced in a healthy manner, only, by *such a mixture*, as we find in a pure atmosphere, consisting of 20 per cent. of oxygen, and 80 of nitrogen. If an air *less pure*, or containing other gases, breathed, these changes are not thoroughly produced; the lungs perform their task with difficulty; and the body and the limbs do not receive their *due supplies of nourishment*, and *vital energy*. They are even *injured* by the *half corrupted* state of the blood; and that weariness and languor are produced, which is always the consequence of spending some time in a bad air. Thus the person, who attends a crowded assembly, where the ventilation is not complete, will find lassitude, and often, chills extending through every limb, and languor invading every faculty of the mind; a feverish, unpleasant taste in the mouth, a restlessness through the following night, and often a degree of exhaustion in the morning, like that which succeeds a night spent in travelling. In order, therefore, to *preserve the body in health*, even after it has gained maturity, and especially to supply it when it is *growing*, and invigorate the constitution when it is forming, it is of the *highest importance* that the air should be preserved in that state of purity which the Creator designed. It is true, that dis-

ease and death do not *immediately* follow every deviation from this standard ; but it is also certain that *some degree of injury must be produced* ; and such a reason for neglect is as insufficient, as it would be to excuse ourselves for giving our friends or our children, food which was partially spoiled, or drink which was partially filthy, because it would not immediately destroy their lives or health. How preposterous and inexcusable would every one regard it, to give them their food constantly mingled with poison, or their drink with pernicious and loathsome insects. Yet it is not less inexcusable to furnish them with *half corrupted air*, or that which contains poisonous gases ! The *food* is given but three times a day ; while the *air* is administered *every moment*. The child is *at liberty* to *receive* or *reject* the food ; but he is forced to breathe the air in which we place him. To put our children or friends in a room, which does not contain that supply of vital air which is necessary for their health, is not only to *offer* them a poison, but to *compel them to take it*. Who can tell how much evil has been ignorantly done in this manner—how much health and enjoyment have been destroyed—how many constitutions have been enfeebled ! The multitude of pale faces and meagre forms to be found on our school benches, and in our colleges, and our manufactories, will answer the question in part.

The following is one fearful example of the effects of negligence on this point. In the Dublin Hospital, during the four years preceding 1785, two thousand nine hundred and forty-four children, out of seven thousand six hundred and fifty, died within a fortnight after their birth ; or thirty-eight out of every hundred. The physician, Dr. Clarke, suspected the cause, and introduced air, by means of pipes six inches in diameter. The consequence was, that during the three years following, only one hundred and sixty-five died out of four thousand two hundred and forty-three, or less than four in a hundred. The fair conclusion, therefore, was, that two thou-

sand six hundred and sixty-five children, of the previous years, died for want of pure air!!* We shudder at the history of the

* The following statements will show that diseases of the most dangerous character, are often produced by the want of ventilation, where no *immediate* injury is perceived. They are extracted from a work recently published in London, by Dr. George Hawthorn, on the subject of ventilation.

"The contagion by which Typhus Fever is produced," says Dr. Lind, "is generated in three ways; the first of which is the confinement of the *healthy animal exhalations* in a crowded and ill-ventilated place." Mr. Howel, and others, who escaped from the black hole at Calcutta, were seized with the Typhus Fever. Dr. Chisholm, in his observations on the remote causes of fever, says: The second proceeds from *human effluvia*, arising from *healthy persons*, but, from the peculiarity of circumstances in which they are placed, in a state of morbid concentration, are capable of generating a principle similar to that produced by infectious and pestilential effluvia." Dr. Fordyce, and others, state, that many brute animals are subject to Typhus, when crowded together in ill-ventilated places. It has been observed to break out among hogs and sheep.

It is very common to find mild febrile attacks among the poor, apparently originating from cold, or other causes, becoming contagious in their course, in consequence of the confined and dirty situations in which the patients live. "I have known a nervous fever," Dr. Ferrier observes, "which was putrid also in several instances, preserved in a small town for almost two years, among the poor alone." In 1779, a fever of the nervous kind raged in Carlisle (England), which did not seem to be introduced from any neighboring place. Dr. Heysham, with great industry, traced its origin to one of the gates, which was tenanted by five or six poor families."

"I conceive it unnecessary to adduce more facts, corroborative of the important truth, that *accumulated and concentrated animal effluvia* are sufficient to produce *diseases of a most malignant and pestilential nature*; or to give more references, to show that such has been the opinion of the *most experienced and learned writers* on the subject. It is a fact, established by the experience of ages, that the most destructive diseases with which our cities and towns have been visited, have generally had their origin either among the poor, whose houses, besides being crowded, are the abodes of all kinds of filth and wretchedness, and destitute of every means of ventilation; or in barracks, poor houses,

“black hole of Calcutta ;” but here was a sacrifice of life, eighteen times as great, in an institution of charity !

A man in health, is supposed to breathe, on the average, twenty times in a minute, and to take in forty cubic inches of air at one inspiration ; or eight hundred cubic inches, equal to $3\frac{1}{2}$ gallons per minute. Of this, one fifth only, or one hundred and sixty cubic inches is vital air, or *oxygen* ; and thirty-two cubic inches, or one fifth of the whole vital air contained, is consumed in the minute, in order to produce the changes in the blood which are necessary to health. In five minutes, therefore, the vital air of the whole $3\frac{1}{2}$ gallons would be consumed ; or, in *one minute*, the vital air of two-thirds of a gallon. In one hour, the whole vital air of nine thousand six hundred cubic inches, or forty-one gallons, would be destroyed, and respiration could no longer be performed.

But in addition to this, an amount equal, or nearly equal, to that of the oxygen consumed, is produced of *carbonic acid*, formerly called fixed air (which often destroys life in wells) ; and this *poisonous gas* is breathed in place of vital air. At the end of half the time mentioned, therefore, we shall have an air composed of only half the proper quantity of *oxygen*, and corrupted by an equal quantity of a poisonous gas. In this view of the subject, we can hardly doubt that *double the supply* we have stated, *i. e.* twenty thousand cubic inches, or

hospitals, prisons, ships, *boarding-schools* ; or in places which are filled with animal effluvia, from a number of persons being confined or collected together. The necessity, therefore, of changing the air in all such situations, is too obvious to require comment.

A dreadful example of the effects of air thus corrupted, upon individuals who breathe it only a short time, occurred at what were termed the Black Assizes, held at the Old Bailey, in London, 1750. The effluvia arising from a large number of prisoners, who were brought into the Court, or confined temporarily in rooms adjoining it, was so destructive, that more than forty persons present were taken sick and died, including four out of six of the judges, and several of the counsel and jury.

eighty-two gallons per hour, would leave a person to faint and die. Facts confirm this estimate.

Particular experiments were made on this subject by Dr. Henderson and Mr. Kite. Dr. Henderson breathed six hundred cubic inches for four minutes, or nine thousand cubic inches, equal to thirty-six gallons, an hour; and was *compelled to stop*, after suffering much oppression and distress for breath.

Mr. Kite breathed five hundred and ninety-one inches, for a minute; equal to seventeen thousand seven hundred and thirty inches, or one hundred and forty-one gallons per hour, and *was greatly oppressed for breath*. He breathed the same quantity $1\frac{1}{2}$ minutes, and the oppression became intolerable; and in two minutes use of $\frac{1}{3}$ gallons of air, (equal to seventy gallons per hour) he became giddy, his face swelled, and he fell back in his chair.

Halley says, that it requires at least one gallon per minute to *sustain life*, or sixty gallons an hour; but this was the air compressed by being in a diving-bell, at the bottom of the sea; and the quantity must be estimated higher at the surface of the earth. *Lavoisier* says, that, according to his experiments, a man would *die* in 5 cubic feet, or eight thousand six hundred and forty inches, in an hour.

It would appear, then, that when a person is *confined* to three hundred cubic inches, $1\frac{1}{4}$ gallons of air a minute, or to eighteen thousand cubic inches, or seventy-two gallons an hour, he will be in danger of *oppressed breathing, and fainting*. He will not receive the supplies necessary to maintain his vital energies without *much more air*. The question, "How little can be afforded without immediate danger to life?" is one which *should never be asked* by a kind, or even faithful educator, concerning that which God bestows in unlimited abundance, and which can only be excluded by inexcusable parsimony, or cruel neglect towards those under our care. We are not merely bound to *keep children alive*, but to give them all the air which is necessary to *invigorate their constitutions, to produce comfort, and cheerfulness, and activity of*

body and mind. We must therefore resort to the instructions of experience as to this point.

Unfortunately, we have few particular observations in regard to school-rooms.

The French writers on *hospitals*, deem it *indispensable* that each patient, (even in the private sick room of a school) should have $6\frac{1}{2}$ *cubic toises of air*,—equal to fourteen hundred cubic feet; and *such* is the plan of the best European hospitals. Sir Gilbert Blane says, six hundred cubic feet are necessary in England (with a climate much colder, and an air generally purer than ours) for each patient; and that with a less quantity “it is *impossible to maintain the requisite purity of the air*.” If we take but half the quantity required by the French, (allowing the rest on account of disease) it will probably be a better rule for our climate; and when we recollect the superior means of ventilation in the immense rooms of a hospital (many of which are seventy feet long and fourteen high) this will *by no means be too much* for a small, close school-room. We shall then have a space of *seven hundred cubic feet* for each pupil;—or, supposing the room to be eight feet high, each child should have *eighty-seven square feet*, or a space of 8 feet by 11. It appears from the facts collected by Mr. Adams,* that the smallest allowance, in several distinguished schools which he visited, was $7\frac{1}{4}$ feet; and the largest, sixteen to a scholar; or, if the room were ten feet high, (as we believe those referred to are,) *seventy-two to one hundred and sixty cubic feet*. Lancaster, whose rooms in England were 15 or 20 feet high, in many cases allowed nine square feet to a pupil, or from one hundred and thirty to one hundred and eighty cubic feet to each; and this where the most rigid economy was demanded. Supposing the ceiling to be ten feet high, —at only the allowance of one hundred and fifty cubic feet to

* See Adams' Lecture, in the collection of Lectures delivered before the American Institute in 1830.

an individual, the *smallest* dimensions of a room for thirty pupils should be 22 feet by 20 feet;—of one for fifty pupils, 30 by 25—for seventy pupils, 35 by 30—and for one hundred—44 by 34 feet. A *liberal* allowance would require at least *one third more*; and *double the space* is *highly desirable*. But if we reduce the space occupied by each child to *less* than that here allowed, we *hazard his health and constitution*, as well as his immediate comfort, in order to avoid an expense comparatively of no moment. And *with this amount of space*, nothing but *frequent and careful ventilation*, and great attention to cleanliness, in the persons of the pupils as well as in the room, will prevent their suffering from the constant exhalations, (often loaded with disease) which arise from the skin, the stomach, and the lungs, and which cannot be weighed and measured, except by the baneful effects they sometimes produce, when they are suffered to accumulate. These *exhalations*, let it be remembered, are *thrown off* by the organs, *because they are injurious to the person himself*. But without due ventilation they must be *respired by others*; and not only that, they are mingled with the saliva in the mouth, and *pass with it into the stomach*. Who can wonder at the loss of appetite, and diseases of the lungs and stomach, which are so commonly connected with ill-ventilated school-rooms! Such places are literally nurseries of disease, and open sepulchres for health and happiness.

In regard to the mode of ventilating school-rooms, it should be remembered, that the *gases and exhalations* in a crowded assembly are of two kinds—those which ascend on account of their heat or lightness to the upper part of the room, and are perceived by those who sit in elevated galleries, or whose heads are in any way raised towards the ceiling—and the *carbonic acid* or fixed air, which is heavier than the atmosphere, and therefore descends, and occupies that part of the room next the floor, in the same manner as it is found to settle in

wells and cellars. To favor the escape of the lighter exhalations, it is indispensable to have openings over the tops of the windows, or in the upper part of the room; and scarcely any degree of ventilation below will supply their place.*—In the winter season, an opening into the upper part of the chimney, when the draft is good, will answer the purpose. Where this is wanting, and especially in rooms where lights are used, a very excellent means of ventilation is found in an artificial chimney, formed by a pipe issuing from the upper part of the room, with a large funnel at the opening, in which a lamp is kept burning. By means of the strong draft here produced, Sir Humphrey Davy, the celebrated English chemist, cleared his laboratory in a very short time, after having filled it with noxious gases.

But it is not less necessary to guard against the effects of the *carbonic acid* which settles in the lower part of the room. In caverns and wells, it often rises only to a certain height; so that above this level an individual may breathe and a light may burn, perfectly well; while a light would be extinguished and the respiration obstructed, or stopped, on descending below it. Thus, in the celebrated *Grotto del Cane*, in Italy, in which this gas issues from the ground, and although it is invisible, can be found by its effects to flow along the ground, a dog will die, while a man whose mouth is elevated above the level of the gas, suffers no inconvenience. The teacher, therefore, especially if he is elevated on a platform, will not always

* I presume many have noticed a fact illustrating this remark, which I have more than once observed in travelling; that when a room which has been closed during the day in warm weather, is aired at night by windows opening only from below, the air will appear for a short time quite fresh; but on shutting the windows, will become, in half an hour, as close as ever. In this case, the warm exhalations and lighter gases remained undisturbed at the top of the room; and as soon as the lower air, which has been cooled, becomes heated, and ascends, they are again brought down, and made perceptible.

be sure that the air of that part of the room in which the smaller children are breathing is good, merely because he perceives no want of purity in that which surrounds him; and, like the man in the Grotto, may be surprised to find that one who breathes below him suffers from the badness of the air. On this account it is of great importance that no part of the room should be below the level of the doors; and that regular provision should be made for opening the doors frequently and for a sufficient time, to allow this deleterious gas to flow off. These circumstances seem to me very decisive arguments against making a school-room descend, as I have sometimes seen, towards the centre, producing a kind of "black hole" for the smaller children; and they show the importance of employing rooms above the level of the ground, for schools, as well as other assemblies of people. The immediate evil effects are imperceptible perhaps; but seeds of disease and debility may be planted, which no subsequent care can eradicate.

The best mode of securing regular ventilation as well as uniform heat in a school-room, during the season when the windows must be closed, undoubtedly is, to introduce the external air from the side, and not from the cellar, of the building, through a stove or furnace, so that it may enter the room warm, diffuse the heat equally throughout, and prevent the current of cold air which presses in at every crevice. In this way also, the doors and windows may be opened at any time, without cooling the room too much, as the air usually presses outward.*

* Several excellent plans have been discovered for this purpose, of which I trust the Committee will furnish some account. I have found, that a common stove might be made to answer the same purpose, in some degree, in the following way:—Let a close case of sheet-iron be made of such dimensions as to rise from the floor to the top of the stove, or a little above it, on three sides; and so large that there will be a space of two inches on all sides between the stove and the case. The stove should be raised on legs, or bricks, a few inches from the

The facts and principles presented in this paper, have been collected with care, from the best and most recent authorities in Chemistry and Physiology within my reach ; * in the hope that they might serve to impress more deeply on the minds of parents, and of the guardians and visitors of our schools, the importance of providing the indispensable means of bodily health and intellectual vigor, *for teachers and their pupils*. It can scarcely admit of a doubt, that the premature decay, or sudden destruction of many a faithful teacher, and the debility of constitution of many a pupil, is brought on by the insidious but poisonous influence of the corrupt air in which they spend their days. The economy, which hazards such results, by providing small school-rooms, can only be compared to that infatuated avarice, *which destroys life, in striving to obtain or to hoard the means of existence*. In no single mode, probably, could the American Institute be more useful, than in establishing and circulating correct views on this important subject ; and I cannot but hope that their efforts will be the means of extensive good, on this and many other subjects of vital importance to the interests of education, and therefore, to the prosperity of our country.

I am, Gentlemen,

Respectfully yours,

WILLIAM C. WOODBRIDGE.

floor, and the opening beneath closed in front with brick—the other three sides being closed by the case. Introduce the air from without, by a wooden trough, and let it rise under the bottom of the stove, and it will pass out between the stove and its case in a pleasant state of warmth. The trough should be furnished with a slide, to regulate the amount of air, according to the warmth of the stove and of the room ; and the case should be so constructed that it may be removed, in order to clean the space around the stove when necessary.

* Among these are Hare's, Gorham's, Henry's, and Silliman's Chemistry ; Richerand's, Magendie's, and Bostock's Physiology ; Londe's Hygiene ; The Paris Dictionary of Medical Sciences, and Rees' Cyclopaedia.

ON THE
CONSTRUCTION
OF
SCHOOL-ROOMS.

[The Censors have been favored with a communication "*On the Construction of School-Rooms*," from the Rev. WILLIAM WOODBRIDGE, which was not offered for the prize of the Institute. On this subject, Mr. Woodbridge speaks with the voice of experience; and the following extracts from his communication, contain an exposition of *principles* which are well worthy of attention. The Censors would not be understood, however, to approve of the *plan* proposed in this communication, in all its details.]

THE subject proposed by the Institute, requires attention to the best modes of constructing, warming, lighting, and airing school-rooms. The construction of a room necessarily depends on the objects to which it is destined, and the ends to be obtained; and these must first be considered. No man *ought* to build, without counting the cost: *viz.—For what purpose* he builds as well as *at what expense*; whether of *money*, or *TIME, HEALTH, OR LIFE*. What millions have been wasted for want of the first! What losses follow miscalculations in the last.

Before stating any particular plan, I would make some general, but essential remarks.

1. The intent of all theoretical and practical education is, to form *the sound mind in the sound body*. This is the central point to which all means are to be directed. How are the powers of genius to be developed in a *sickly* child? What are the *public uses* of theology, in a dyspeptic divine? or the energies of wisdom in a consumptive habit?—in a walking corpse? *Health* then, and *wisdom*, are the great objects of education: “*United they flourish—divided they die.*” For this the church—the nation—is in mourning.

2. *Fresh air*, and *cleanliness* in every form, are absolutely and imperiously essential in our common schools.

3. Clear light, easy and convenient seats and benches, that favor easy attitudes of body, appear to be important, if not essential points in the structure of school-rooms. *Uneasy bodies* render the mind uneasy and restless. Clear images of truth cannot be reflected from turbid and agitated water.

4. To *prevent* is easier than to *rectify* disorders in a school. In order to do this, no scholar should be out of his teacher’s eye five minutes in a day.

Such vigilance is essential to order; as it convinces the scholar that nothing can be done, even slyly, without detection, nor can study be neglected without notice: it is a first principle in the teacher’s art, the first in school tactics. Therefore every school-room ought to be so constructed as to render this great and incessant duty convenient.

5. The “*non-naturals*,” to use the Physician’s term, have great effect upon the *mental temper*, as well as the physical system. A village fiddler takes great care of his violin, keeps it carefully from wet and dampness and too much heat, which affect the tone of its strings, and render them too tense or too lax; surely then the nervous and muscular system requires attention. *Mental habits* are formed under the hand of the teacher. Passions are to be regulated into proper discipline, for self-command, and social order, and regular sub-

jection. *Nothing* that belongs to the means of their regulation is trifling.

"Just as the *twig is bent*, the tree's inclined."

The distorted sapling is low, unshapely, and crooked, while the well trained tree, which is near it, grows tall and upright.

LIGHT.

Windows for a school-room ought to be high, for several reasons. 1. When low, the light is interrupted by every intervening object, and throws the pages of the reading and writing book into the shade. 2. Low windows when opened bring a current of air directly upon the pupils, and expose those before it. 3. Low windows incline the scholar to look out too long and too often. The *upper sash* of every public room ought to be hung with a weight, that it may be let down in order to allow the hot and lighter exhalations, which rise to the ceiling, to escape. 4. The *saving of glass* would be a serious advantage in point of convenience and economy; for low windows are often broken, and often *go a long time un-mended*, from the neglect of committees. 5. The same quantity of glass in a sky-light, would produce double the quantity of light. The sky-light might also be so hung as to air the room, often and easily.* 6. The end or side windows, ought to be high, and their light thrown upon the benches *lengthwise*; otherwise it will admit an inconvenient shade. Every purpose then both of air and light will be best secured by *high windows*, combined with sky-lights where it is practicable, throwing the light lengthwise over the benches, supposing these to be sloping.

* The glass might be of the kind called bull's eye, that would stand the weather, and be more secure from accidents.

HEAT.

Heat in a school-room ought to be equally diffused through every part. This can rarely be done without a stove. No seats or benches ought to touch the floor, therefore, to prevent the free circulation of warm air to the feet. Such seats also would interrupt the sweeping, which ought to be done *daily* and *well*. The fire ought to be kindled early in the morning; otherwise children become uneasy and fretful, and nothing goes on well. When the warm air of a stove-heat meets the scholar's cheek, as he enters school, he is at once pleased and easy. On the other hand too great a degree of heat renders the scholars uneasy, listless and fretful, and the teacher more languid.

There ought to be a *thermometer* in *every school-room*, and the heat regulated to fifty-five or sixty degrees. If the preservation and health of the plants of a green-house deserve this care, should it not be used for a school of children? Our feelings often lead us to judge incorrectly of the temperature; and a teacher who is chilled or feverish, may render his scholars uncomfortably hot or cold, by regulating the room according to his own sensation.

When the room is well warmed in the morning, little, if any additional fuel will be necessary until noon. The breath and perspiration of a school, will keep up the temperature of the room until nearly noon, when the heat ought to abate, to prevent too great a change in passing into the cold air. The same regulation should be observed in the afternoon, and especially in the evening school. Stove-heat is far the most economical as well as most equally diffused through a room. It is of little importance in what part the stove stands; but it ought to have a *foot-board*, say six or eight inches high, if the stove be twelve or fifteen inches from the floor; and six inches wide, to set the feet on, in order to dry and warm them, and at a *safe distance* from the stove. To set with cold or wet feet, for several hours, produces immediate uneasiness,

and often danger. Above this, there ought to be a railing to prevent the children coming too near the sides and top of the stove. An open fire-place is sometimes *dangerous*, and even *fatal*, to children dressed in cotton. I have had two or three grown children whose clothes have taken fire, who were saved with difficulty, from dangerous if not fatal burning. No school-room ought to be left without some careful person, nor the fire renewed without the teacher's direction.

AIR.

The quantity of fresh air necessary to life, amounts to more than one gallon for each person for every minute, or seventy-two gallons an hour. So much then must be *ruined* by respiration; and so much *restored by ventilation* every hour. For want of this change of air, attendance upon meetings in a school-house or confined room, soon communicates languor and weariness to a painful degree. Attendance on a crowded assembly is followed by a sleepless or restless night; and a weary day follows from no other cause. How many asthmatic and fatal lung complaints arise from this single cause.

In looking back upon the languor of *fifty years* of labor as a teacher, reiterated with many a weary day, I attribute a great proportion of it to *mephitic air*; nor can I doubt that it has compelled *many worthy and promising teachers* to quit the employment. Neither can I doubt, that it has been *the great cause* of their subsequent sickly habits, and untimely decease. A few, by timely vigilance and care, have prolonged life, until age has given them a fair discharge. It is to be noted that they were *men of temperance*, either from inclination, virtue, or *necessity*—or men of very strong natural constitution. But how shall we prevent the deleterious effects of want of air, which we have described, upon the physical and mental system? From eight to sixteen square feet of area in a school-room have been estimated as necessary to secure a

convenient space for air and the exercise of the school. Why not be liberal of space and air? Parsimony here is "*penny-wise,*" it is *extravagance of health and life.*

GENERAL CONSTRUCTION.

In the division of a school-room, I would place the teacher on an elevated platform, eighteen or twenty-four inches above the horizontal floor of the house, from which his eye can easiest view every part. This platform may serve as a stage for speaking and reading select pieces. In front of this platform, on each side of the teacher's desk, should be a board, or desk, ten or twelve inches wide, and conveniently high for a class to rest their books upon when they are receiving lessons, or occasionally to place an idler at, to study. Behind the teacher's platform, ought to be a book-closet, for maps, apparatus, or instruments for school use. A clock that would cost from five to eight dollars, would save its cost every week, besides fixing the habit of punctuality, of diligent study and orderly recitation. *Time is money.* Every minute lost in a school of forty-five scholars amounts to three-fourths of an hour. And all this may be saved several times every day, by the punctuality which a clock produces.

DESKS AND BENCHES.

Having tried all kinds of seats and boxes, I prefer those of the Andover and Exeter academies. These consist of seats and boxes twenty-four inches long, fifteen to eighteen wide; sloping one inch, with the lid $1\frac{1}{2}$ or 2 inches wider than the body of the desk; rising from the seat to the *elbow* of the student. One inch higher might be as well, or even better. The boxes, or desks, may be four or five inches deep next the seat, and six or seven on the other side. The parting of these desks should consist of $1\frac{1}{2}$ inch cross-pieces, upon which the lids will rest. The back of each seat will support the box part of the seat behind it. These upright backs will be mor-

ticed into two upright plank posts, and these posts into two wide joists, of four or five inches thick. The seats, say ten or twelve inches wide, may be twelve to fourteen or fifteen inches high ; more or less, to suit larger or smaller boys. Between the seat, and its desk, allow only room to stand up. *All seats* ought to have open backs, with narrow boards on the top to rest the back upon.

I have thus given my views in a brief and hasty manner, which circumstances render unavoidable, and request the Institute to dispose of them as they deem best.

(Signed)

WILLIAM WOODBRIDGE.*

* The Rev. Mr. Woodbridge is now seventy-five years of age. He was the first principal of the Phillips Exeter Academy. He commenced, in 1780, the only school known for *instructing females in the high branches of knowledge*, was instrumental in forming the earliest *association of teachers* of which we have any account in this country, in 1799—and was for fifty years actively engaged in teaching.

ELEMENTARY SCHOOL-ROOMS.

[The following judicious and pertinent hints are extracted from the "School Magazine" for April, 1829. It is hoped they may furnish some useful suggestions to teachers and others who are interested in ELEMENTARY SCHOOLS.]

IN the selection of school-rooms in cities, the following things seem highly important : *that the situation chosen be not confined, or dark, or damp, but embrace, as far as possible, the advantages of pure air and free circulation, along with the full privilege of light, and, if possible, a pleasant aspect.* Surrounding objects should, as far as possible, contribute to cheerfulness. This is a principle of great importance in all our arrangements for early education.

Where the advantage of a play-ground can be had, pains should be taken to keep it *dry* ; as it cannot otherwise be wholesome. If a plat, ever so small, can be appropriated for a few shrubs and flowers, or even a single tree, it may be rendered a source of valuable instruction, as well as of immediate enjoyment.

A little care will prevent any injury being done to such a spot, or its productions. In the English infant schools, a bed of shrubs or flowers is sometimes added to the play-ground, for the very purpose of affording opportunity of cultivating early the natural sensibilities of infancy towards the works of creation, and of cherishing in the young mind habits of self-command, and a respect for the rights of property. Mr. Wilderspin, of the infant school in Spitalfields, recommends to all teachers of schools for little children, an arrangement of this sort ; adding the testimony of his experience, that in several

years' teaching of children from indigent and perhaps ill-regulated families, he seldom or never found this expedient for juvenile improvement fail of producing the happiest effects.

To render school-rooms in cities less injurious to the health of young children than they sometimes prove, the following precautions have been found serviceable. *To dispense entirely with close stoves, and to make use of open stoves, or, when possible, of fire-places. To keep a thermometer in the school-room, for the purpose of regulating the temperature, whether in summer or winter. To have one or more of the windows made so as to let down at top.* The raising of windows sometimes throws a strong current on the heads and necks of children, when in a state of exposure from a previously overheated room. At some seasons of the year, this method of ventilating is dangerous, and in all it is injurious. In winter, and especially in the afternoon school hours, great relief from oppressive warmth or closeness, may be obtained by a single pane in the upper part of any of the windows being framed, so as to turn on small hinges, in the manner of a door. A few circular openings in the ceiling serve, in some measure, the same purpose. To secure both of these last mentioned contrivances, would probably be found most desirable.

With these brief hints we must leave the subject of school-rooms in relation to the circumstances of a city, and proceed to the consideration of arrangements applicable to elementary schools in the *country*. We may be permitted, in the first place, a few remarks on the choice of situations for the erection of school-houses. The selection of the spot on which the building stands, is too often made, in New England, at least, with mere reference to a location precisely central for the population of the district. A little attention to the wants and comforts of the children, if substituted for the views and wishes of grown people, would lead to a choice very different from what is sometimes made.

How often may the passing traveller observe, whether in the severity of winter, or the scorching heat of summer, the district school-house exposed in an angle of a bare field, to the violence of the wind, or the heat of the sun, when, at the distance of a hundred rods, might be found the shelter of an adjacent eminence, or the shade of an inviting grove. Were parents, in all cases when the site of the school-house is in agitation, to think of their children's happiness rather than their own predilections, the right decision would be always made; and the building would be erected where *education*, (and not *local feeling*,) required it to be.

The free scope for exercise commonly enjoyed by children in the country, renders any arrangement for health less a matter of importance there, than it is in cities. Still, an enlightened regard to the influence of circumstances in education, would lead to endeavor for securing every possible advantage, whether of a moral or a physical nature. It is by no means a rare circumstance, that the school-house is so situated as to have no adjoining space for recreation. Children are in consequence of this, sometimes left to find their amusement by playing in the road or in the street. In retired, shady, and pleasant situations, this disadvantage is comparatively slight. In rainy or dusty weather, however, and where young children are of necessity exposed to an oppressive sun, the evils are obvious.

To secure the *safety* of the younger children, without irksome restraint, is also a matter of importance in central situations, and near to roads on which there is much travelling. An appropriate play-ground, besides offering attractions for pursuing recreation in a safe and suitable spot, becomes a source of pleasure as a property and possession,—a thing not without its influence, even in childhood.

Many important considerations might be advanced, in addition to those now offered, on this point. But our present object is to submit hints which may lead to further thought, rather than to attempt a full view of the subject. Besides

there are several useful exercises of an intellectual nature, which may be united with bodily recreation ; and for these purposes an adequate space, and sufficiently retired, by means of a fence or otherwise, is indispensable. This is more particularly the case in regard to those blended forms of amusement and instruction which have been introduced with so salutary an effect in infant schools, and which, with a little exertion, might be afforded to the younger classes of pupils in all primary schools.

Great benefit would often be conferred on health, and a valuable aid would be rendered to cheerfulness and mental activity, by extending the arrangements made for the education of childhood, so far as to furnish opportunities for exercise and recreation in unfavourable weather. *A large shed constructed of the plainest materials, would, in this view, be a very desirable addition to the accommodation, and the innocent and healthful pleasures of children.* In inclement weather, the labors of the teacher would sometimes be lightened by employing such a building as a receptacle for classes whose presence was not, at the moment, required in school ; and whose uneasiness must otherwise be repressed by stern measures, or be left to occasion disturbance and interruption.

The subject of facilities for recreation we must now dismiss, with the single remark, that this is a point of great importance to the whole character of the young. Measures for promoting health are of value in proportion as they are used early, while the frame is susceptible, and every favorable change is effectually seconded by nature. A clear, strong, and ready mind, is inseparably connected with health and activity of body ; and the purity of the young heart is best sustained in those instances in which the laws of the human constitution are attentively observed. The period of childhood offers, moreover, strong inducements for an affectionate care of its welfare, by the simplicity of the means it requires to be used for its advan-

tage. The infant does not ask for multiplied and costly resources; it solicits, with nature's true eloquence, the privileges of protection and freedom, the cheering light, and the invigorating air, and the use of its limbs,—benefits in regard to which our prevailing views of education have been extremely narrow.

The next topic to which we would invite the attention of our readers is *the plan on which school-houses are usually erected*. Several changes might be advantageously made in this particular. Of those which seem most important one is *the enlarging of the plan of the building*, with a view to prolonging the season of teaching, and conducting the instruction of the elder and the younger classes, during a part of the year, under the same roof. A more liberal allowance of space, than has been customary in the planning of school-houses, would at least afford opportunity for arranging and classing the scholars to better advantage, and for introducing new facilities for instruction in several departments of education.

Few measures, perhaps, for the improvement of popular education would be more effectual, than an arrangement which might afford the requisite facilities for advancing, in an adequate manner, the progress of the elder classes in common schools. The great number of children now usually under the care of the teacher of a winter school, and their very unequal ages and capacity, hinder the improvement of all, by confining and embarrassing the efforts of the instructor. To divide the school, so as to arrange the younger scholars in an elementary department, under the care of a female assistant or of monitors, would be a great step towards a general reformation of instruction.

The additional expense of the salary of an instructress would probably amount, in some cases, to an entire obstacle to such an arrangement. But there are few school districts in which the requisite number of scholars sufficiently advanced in years and in education, could not be found, competent to render a limited but effective assistance, under the eye of a qualified

master. In like manner, where summer schools are very numerous, the instructress, if adequate to the charge, might, by the instruction which she should afford to a female class of the proper age and ability, remunerate them for the assistance they might render, in teaching the younger scholars.

To facilitate any plan of this sort, it would be desirable, in all cases, to have the school-room large enough to admit of the principal and the subordinate instruction going on at the same time, under the personal care and the superintending eye of the teacher.

An improvement of some value in the planning of school-rooms would be gained by having *two doors*, instead of one. In this way, *a separate entrance might be appropriated for scholars of each sex*, or for the younger, and the elder classes.

An improvement in the arrangement of the *windows* of school-rooms would be attained, *by placing them much higher from the floor than is now customary*, and having, if necessary on this account, a higher ceiling. Several advantages would be thus obtained. A large space of wall would be gained, which would admit of a range of maps, or useful tables, of letters, figures, weights, measures, &c., besides pictures illustrative of geography and natural history, such as are now afforded in small and cheap publications adapted to primary schools. But the greatest advantage attained in this way would be a range of 'black board,' round the greater part of the room, for various uses in spelling, ciphering, and any other department of instruction which requires or admits illustration addressed to the eye.

To elevate the windows of school-houses would be attended with two other advantageous consequences. *It would tend to keep the attention of the scholars from being attracted to occurrences and objects out of doors, and in summer would afford opportunity of ventilation, without the disadvantage of throwing the current of air directly on the heads of the children.*

P L A N

OF A

VILLAGE SCHOOL-HOUSE.

It is believed that the leading *principles*, advanced in the Prize Essay, will be generally approved by practical teachers; but there may be those who would prefer a school-room arranged on a *plan* somewhat different from that which the author proposes. The Censors have determined, therefore, as the whole subject was committed to them, to annex to the Essay another plan, which, they hope, will be acceptable to the members of the Institute.

Plate II is the ground-plan of a village school-house, for both sexes, containing eighty separate seats and desks. Additional seats for small children, who may not require *desks*, can be introduced at pleasure, and the teacher can arrange them in such situations as may be most convenient. For this purpose a sufficient number of light, moveable forms should be furnished.

The whole edifice, exclusive of the portico in front,—which may be omitted, if a cheap, rather than a tasteful building is required,—is 58 feet long, and 35 feet wide. The dimensions of the *school-room* allow 21 feet of floor to each of eighty scholars, the passages, teacher's platform, &c. being included. It is believed that this allowance is not too liberal,—is not more than is required for the comfort, health and improvement of

the scholars.* If we were called upon to name the most prominent defect in the schools of our country,—that which contributes most, directly and indirectly, to retard the progress of public education, and which most loudly calls for a prompt and thorough reform, it would be, the want of spacious and convenient school-houses.

The plan here proposed may be enlarged or diminished, for a greater or less number of scholars, according to the following scale :—For ten scholars, add 4 feet to the length ; for sixteen scholars, add 4 feet to the width ; for twenty-eight scholars, add 4 feet to both length and width. For a less number of scholars, the length or breadth, or both, may be diminished at the same rate.

In villages and populous neighborhoods, would not the interests of education be promoted, if the children were judiciously classed in a *series of schools*, according to their attainments? There might be one commodious building, containing separate rooms for two, three, or more schools, according to the number of children that could conveniently attend. A regular system of studies for the whole establishment should be determined, and its appropriate part of that system be assigned to each school. Stated examinations should be held ; and the scholars should be advanced from the lower to the higher departments, according to their progress in the several studies. To give a unity to the mode of government and teaching, the principal instructor should exercise a general superintendence over all the schools ; and the senior pupils might be called upon, from time to time, to assist the teachers in the lower departments. They would thus render useful

* It may not be amiss to state, that two of the Censors teach large private schools in Boston ; and, in their respective schools, they allow, for each of their scholars, about 22 square feet of floor, exclusive of entries, dressing-rooms, recitation-rooms, &c. One of the school-rooms is 16 and the other 18 feet high,—the former giving about 350, and the latter about 400, cubic feet of space, to each scholar.

aid to the school, review their own studies in the best manner, and prepare themselves to engage in the business of teaching, should they wish to do so. In cities and large towns, such a union of successive schools is perfectly practicable; and it cannot be doubted that such an arrangement would be attended with many advantages.

The *school-room*, represented in the plan annexed, is 48 feet long, and 35 feet wide, within the walls.

The floor of the room should be level, and not an inclined plane. Nothing is gained by the common mode of finishing school-rooms with inclined floors; and much is lost in symmetry, convenience and comfort. A faithful and active teacher will be about among his scholars, and not confine himself to a fixed seat, however favorably situated for overlooking them.

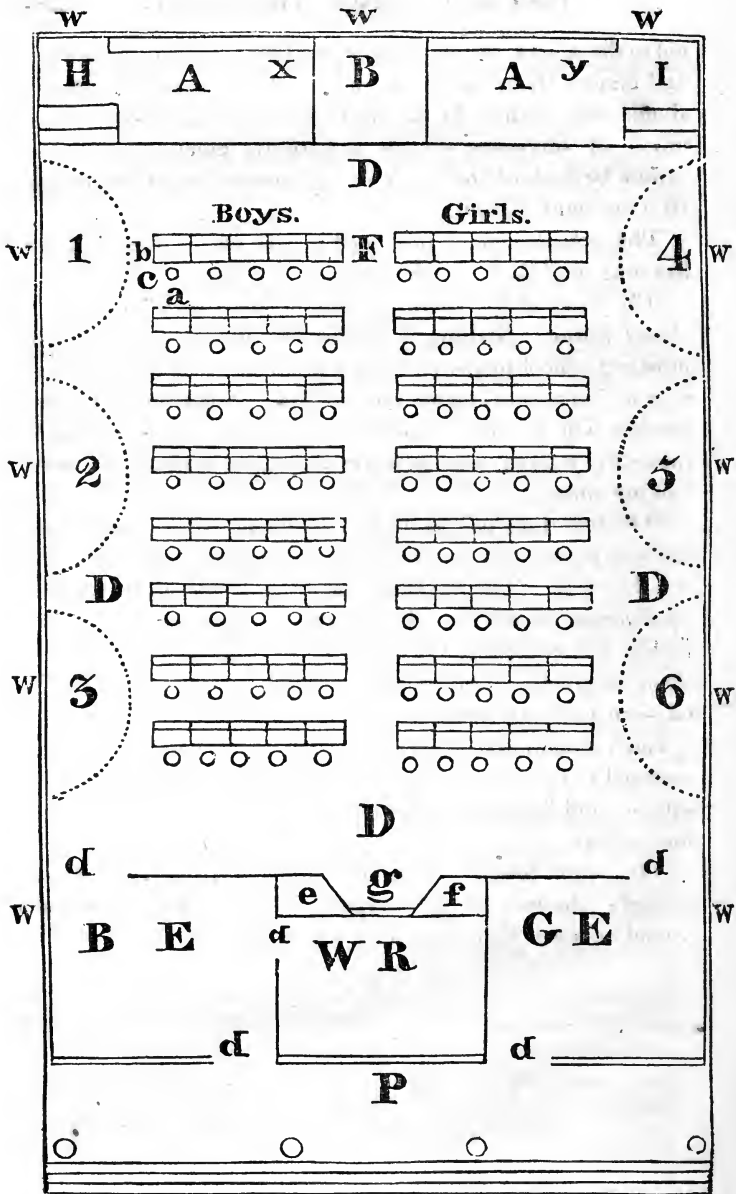
Whether there be a stove in the school-room or not, there ought to be an open fire-place, where children may warm and dry their feet. The fire-place should be furnished with a hot-air chamber, to facilitate the ventilation of the room.

The lids or tops of the scholars' desks are usually made to slope too much. They should be nearly, if not quite horizontal,—an inch to a foot being a sufficient slope.

Each scholar should have a separate seat, which should be confined to the floor. The seat should be about 13 inches square, and furnished with a back not more than 10 or 12 inches high.

The *front* rows of seats and desks, or those nearest the master's platform, being designed for the smaller children, should be lower than those near the entries.

PLATE II.



EXPLANATION OF PLATE II.

- P* Doric Portico in front of the School-house.
- d, d, d, d, d* Doors.
- B E* Boys' Entry, 12 by 10 feet.
- G E* Girls' Entry, 12 by 10 feet.
- W R* Wood-Room, 11 by 8 feet.
- g* Fire-place.
- c* Closet.
- f* Sink, to be concealed by a falling door balanced with weights.
- D, D, D, D* Passage around the room, 6 feet wide.
- 1, 2, 3, 4, 5, 6* Stations marked on the floor, to be used by classes when reciting to monitors.
- A B A* The Teacher's Platform, extending across the room, 6 feet wide and 9 inches high.
- B* A part of the Platform, to be removed in the winter, if necessary, to make room for a stove.
- x* Cabinet for apparatus, specimens, &c.
- y* Book-case.
- H* Master's Desk.
- I* Assistant or Monitor's Desk.
- F* Centre Passage; in the plan drawn 3 feet wide, but 4 feet would be better.
- b* Scholars' Desks, 18 inches wide and 2 feet long.
- c* Scholars' Seats.
- a* Passages between the seats and the next row of desks, 15 inches wide. A desk, seat, and passage, occupy 4 feet; viz. desk 18 inches, space between the desk and seat 2 inches, seat 13 inches, and passage 15 inches.
- w w, w, &c.* Windows, which should be placed high from the floor.

The scale on which Plate II. is drawn, is one tenth of an inch to a foot.

ACT OF INCORPORATION.

COMMONWEALTH OF MASSACHUSETTS.

IN THE YEAR OF OUR LORD ONE THOUSAND EIGHT HUNDRED AND THIRTY-ONE.

An Act to incorporate the American Institute of Instruction.

SECTION 1. *Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That Francis Wayland, Jr., William B. Calhoun, William Sullivan, John Adams, John Park, Thomas H. Gallaudet, Andrew Yates, Roberts Vaux, William C. Fowler, Reuben Haines, Gideon F. Thayer, Solomon P. Miles, William C. Woodbridge, Ebenezer Bailey, Abraham Andrews, Otis Everett and James G. Carter, together with their associates, be, and they hereby are made and constituted a Corporation in the city of Boston, by the name of the American Institute of Instruction, with all the powers, rights, duties and liabilities usually incident to Corporations, for the purpose of promoting and improving the means of education and instruction in Morality, Science and Literature.

SECTION 2. *Be it further enacted,* That the said Corporation may appoint such officers, and make such by-laws, rules and regulations, as it may see fit; provided the same be consistent with the Constitution and Laws of this Commonwealth.

SECTION 3. *Be it further enacted,* That said Corporation may hold real estate to the value of ten thousand dollars, and personal estate to the value of twenty thousand dollars, in its

corporate name ; and use and improve the same for the benefit of this Institution, and for all lawful purposes incident to the powers hereby granted.

SECTION 4. *Be it further enacted*, That any persons named in this Act may call the first meeting of the members of this Corporation by public advertisement in any newspaper printed in Boston, two weeks successively before the day of meeting.

SECTION 5. *Be it further enacted*, That this Act shall be subject to be altered, or amended, or repealed at any time, at the will of the Legislature.

In House of Representatives, March 3, 1831.

Passed to be enacted.

WM. B. CALHOUN, Speaker.

In Senate, March 4, 1831.

Passed to be enacted.

SAMUEL LATHROP, President.

March 4, 1831.—Approved.

LEVI LINCOLN.

CONSTITUTION
OF THE
AMERICAN INSTITUTE OF INSTRUCTION.

P R E A M B L E.

WE, whose names are hereunto subjoined, pledging our zealous efforts to promote the cause of popular education, agree to adopt the following Constitution, and to obey the By-Laws made in conformity thereto.

ARTICLE I.....NAME AND OBJECT.

The Society shall be known by the title of the AMERICAN INSTITUTE OF INSTRUCTION. Its object shall be the diffusion of useful knowledge in regard to education.

ARTICLE II.....MEMBERS.

1. Any gentleman of good moral character, interested in the subject of Education, may become a member of this Institute, by signing this Constitution, and paying, at the time of his admission, a fee of one dollar.*

2. An annual assessment of one dollar, shall be laid upon each member, by neglecting to pay which, for more than one

* Members of the Institute may receive their certificates of membership by sending to the Treasurer the annual assessment. Gentlemen residing at a distance, who wish to join the Institute, may do so, by sending to the Treasurer one dollar, and authorizing him to sign their names to the Constitution.

year after due notice from the Treasurer, he shall cease to be a member of the society.

3. Any gentleman, by paying at one time the sum of twenty dollars, shall become a member of the Institute for life, and be exempted from all future assessments.

4. Honorary members may be elected by the Institute, at the recommendation of two thirds of the Directors present at any stated meeting of that Board.

5. For dishonorable or immoral conduct, a member may be dismissed from the society, by a vote of two thirds of the members present, at any regular meeting.

6. Ladies, engaged in the business of instruction, shall be invited to hear the annual address, lectures, and reports of committees on subjects of Education.

ARTICLE III.....MEETINGS.

1. The annual meeting of the Institute shall be held at Boston, on the Thursday next preceding the last Wednesday in August, at such place and hour as the Board of Directors shall order.

2. Special meetings may be called by the Directors.

3. Due notice of the meetings of the society shall be given in the public journals.

ARTICLE IV.....OFFICERS.

1. The officers of the society shall be a President, Vice Presidents, a Recording Secretary, two Corresponding Secretaries, a Treasurer, three Curators, three Censors, and twelve Counsellors, who shall constitute a Board of Directors.

2. The officers shall be elected annually, in August, by ballot.

ARTICLE V.....DUTIES OF OFFICERS.

1. The President, or, in his absence, one of the Vice Presidents, or, in their absence, a President *pro tempore*, shall preside at the meetings of the Institute.

2. The Recording Secretary shall notify all meetings of the society, and of the Board of Directors ; and he shall keep a record of their transactions.

3. The Corresponding Secretaries, subject to the order of the Board of Directors, shall be the organs of communication with other societies, and with individuals.

4. The Treasurer shall collect and receive all moneys of the Institute, and shall render an accurate statement of all his receipts and payments, annually, and whenever called upon by the Board of Directors ; to whom he shall give such bonds for the faithful performance of his duty, as they shall require. He shall make no payment except by their order.

5. To the Board of Directors shall be entrusted the general interests of the society, with authority to devise and carry into execution such measures as may promote its objects. It shall be their duty to appoint some suitable person to deliver an address before the Institute, at their annual meeting ; to select competent persons to serve on Standing Committees, or to deliver lectures, on such subjects relating to education as they may deem expedient and useful ; to collect such facts, as may promote the general objects of the society ; and to provide convenient accommodations for the meetings. They shall, at the annual meeting, exhibit their records, and report to the Institute. They shall have power to fill all vacancies in their Board, from members of the society, and make By-Laws for its government.

6. It shall be the particular duty of the Curators to select books, and to take charge of the library of the Institute.

7. The Censors shall have authority to procure for publication the annual address and lectures. It shall be their duty to examine the annual reports of the Standing Committees, and all other communications made to the society ; and to publish such of them, as, in their estimation, may tend to throw light on the subject of education, and aid the faithful instructor in the discharge of his duty.

8. It shall be the duty of the President, the Vice Presidents, and Counsellors, severally, to recommend to the consideration of the Board of Directors such subjects of inquiry, as, in their opinion, may best advance the great objects of the Institute.

9. Stated meetings of the Board of Directors shall be held at Boston on the first Wednesday in January; on the last Wednesday in May; and on the day next preceding that of the annual meeting of the Institute in August.

ARTICLE VI.....BY-LAWS AND AMENDMENTS.

1. By-Laws, not repugnant to this Constitution, may be adopted at any regular meeting.

2. This Constitution may be altered or amended, by a vote of two thirds of the members present at the annual meeting, provided two thirds of the Directors, present at a stated meeting, shall agree to recommend the proposed alteration or amendment.

BY - LAWS .

I. At all meetings of the Board of Directors, seven members shall be necessary to constitute a quorum to do business.

II. The Board of Directors shall annually choose a Committee of Finance, whose duty it shall be to audit the accounts of the Treasurer, and, under the control of the Board of Directors, to draw orders on the Treasurer for the payment of charges against the Institute.

III. It shall be the duty of the Recording Secretary, on application of any two Directors, to call special meetings of the Board.

OFFICERS
OF THE
AMERICAN INSTITUTE OF INSTRUCTION.

PRESIDENT.

FRANCIS WAYLAND, President of Brown University, Providence, Rhode Island.

VICE PRESIDENTS.

WILLIAM B. CALHOUN, Springfield, Massachusetts.
WILLIAM SULLIVAN, Boston, Massachusetts.
JOHN ADAMS, Andover, Massachusetts.
JOHN PARK, Worcester, Massachusetts.
THOMAS H. GALLAUDET, Hartford, Connecticut.
ANDREW YATES, Chittenango, New York.
ROBERTS VAUX, Philadelphia, Pennsylvania.
WILLIAM C. FOWLER, Middlebury, Vermont.
REUBEN HAINES, * Germantown, Pennsylvania.
BENJAMIN B. WISNER, Boston, Massachusetts.
THOMAS S. GRIMKE, Charleston, South Carolina.
JOHN GRISCOM, New York city, New York.
TIMOTHY FLINT, Cincinnati, Ohio.
PHILIP LINDSLEY, President of the University of Tennessee, Nashville, Tennessee.
ALVA WOODS, President of the University of Alabama, Tuscaloosa, Alabama.
BENJAMIN ABBOT, Exeter, New Hampshire.
WILLIAM WIRT, Baltimore, Maryland.

* Deceased.

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CORRESPONDING SECRETARIES.

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WILLIAM C. WOODBRIDGE, Hartford, Connecticut.

TREASURER.

BENJAMIN D. EMERSON, Boston, Massachusetts.

CURATORS.

ABRAHAM ANDREWS, Boston, Massachusetts.

FREDERICK EMERSON, Boston, Massachusetts.

CORNELIUS WALKER, Boston, Massachusetts.

CENSORS.

EBENEZER BAILEY, Boston, Massachusetts.

JACOB ABBOTT, Boston, Massachusetts.

CORNELIUS C. FELTON, Cambridge, Massachusetts.

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WILLIAM FORREST, New-York city, New-York.

WALTER R. JOHNSON, Philadelphia, Pennsylvania.

JOHN KINGSBURY, Providence, Rhode Island.

SAMUEL P. NEWMAN, Professor in Bowdoin College, Brunswick, Maine.

HENRY K. OLIVER, Salem, Massachusetts.

ASA RAND, Boston, Massachusetts.

OLIVER A. SHAW, Richmond, Virginia

ELIPHA WHITE, John's Island, South Carolina.

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